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

2025-2026

Introduction

The academic program of the Department of Agricultural Mechanization Techniques is a coordinated and organized package of courses that include teaching procedures and practical experiences arranged into study units. Its main purpose is to build and refine graduates' skills in operating, maintaining, repairing and managing agricultural machinery and equipment, so that they are qualified to meet the requirements of the labor market in the agricultural sector. The program is reviewed and evaluated annually through internal and external audit procedures and programs, such as the External Examiner program.

The importance of this program stems from the growing role of agricultural mechanization in raising the efficiency of agricultural production, lowering its cost and improving productivity. It also stems from the need for technical staff capable of working with tractors and with tillage, planting, harvesting and irrigation equipment, and of keeping pace with modern agricultural technologies. The program combines theoretical study with practical training in workshops, laboratories and applied fields.

The academic program description provides a concise summary of the program's main features and its courses, and shows the skills that students are expected to acquire in line with the program's objectives. Its importance lies in being the cornerstone for obtaining program accreditation. It is written jointly by the department's teaching staff under the supervision of the scientific committee.

This description of the academic program of the Department of Agricultural Mechanization Techniques for the academic year 2025-2026 has been prepared after updating its contents in light of developments in the educational system in Iraq and the Guide to Academic Program and Course Description issued by the Department of Quality Assurance and Academic Accreditation. It covers the traditional system (annual, semester-based) as well as the generalized description for programs that adopt the Bologna Process track as the basis of their work.

In this regard, we stress the importance of writing the academic program and course descriptions for the Department of Agricultural Mechanization Techniques, to ensure the smooth running of the educational process and to raise the quality of its outcomes.

Concepts and Terminology

Academic program description: A brief overview of the department's vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course description: A brief overview of the main characteristics of the course (such as internal combustion engines or agricultural machinery) and of the learning outcomes the student is expected to achieve, demonstrating whether the student has made the most of the learning opportunities available. It is derived from the program description.

Program vision: An ambitious picture of the future of the academic program, so that it becomes advanced, inspiring, realistic and applicable, and a leader in the field of agricultural mechanization techniques.

Program mission: States concisely the objectives and the activities needed to achieve them, and defines the program's development paths and directions.

Program objectives: Statements describing what the program intends to achieve within a specified period of time. They are measurable and observable.

Curriculum structure: All the courses included in the academic program according to the adopted study system (semester-based, annual, Bologna track), whether they are ministry, university, college or department requirements, together with the number of credit units.

Learning outcomes: A coherent set of knowledge, skills and values that the student has acquired after successfully completing the academic program. The learning outcomes of each course must be defined in a way that achieves the program's objectives.

Teaching and learning strategies: The strategies used by faculty members to develop students' teaching and learning. They include theoretical lectures and practical training in workshops, laboratories and the field, and they describe all in-class and out-of-class activities used to achieve the program's learning outcomes.

Academic Program Description Form

For the Academic Year 2025-2026

University Name: Al-Furat Al-Awsat Technical University

Al-Musayyib Pollytechnic Collage

Scientific Department: Farm Machinery Techniques Department

Professional Program Name: Diploma in Farm Machinery Techniques

Final Certificate Name: Diploma in Farm Machinery Techniques

Academic System: Semester

Description Preparation Date: 2025-2026

File Completion Data: 6/8/2026

Signature:

Head of Department Name:

Dr. Ameer Hasan Hamza

Date: 6/8/2026

Signature:

Scientific Associate Name:

Dr. Mohammed Hadi Sabri

Date: 6/8/2026

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 6/8/2026

Signature:

جامعة الفرات الأوسط التقنية
المعهد التقني المسيب
شعبة ضمان الجودة والأداء الجامعي

Approval of the Dean

6.10.2026

Assist. Prof

Dr. Malik N. Hawas

DEAN

ogram Vision

The Department of Agricultural Mechanization Technologies works through its educational programs to create a technical system based on the requirements and needs of the community and the service establishment related to the specialization, in order to serve the technological and technical development in agricultural mechanization sciences.

2.Program message

The department works to achieve its goals and aspirations by creating a suitable learning environment and providing all the necessary material and human resources. It also strives to graduate cohorts capable of serving the community by providing scientific expertise in the field of agricultural mechanization through technical education that adheres to internationally recognized quality standards.

3.Program objectives

The Department of Agricultural Mechanization Technologies aims to prepare technical staff capable of working in the field of mechanical, electrical and hydraulic agricultural machinery and equipment, and knowing how to manage and maintain them.

4.Program accreditation

There is

5.Other external influences

No D

6.Program structure

Program structure	Number of courses	Study unit	Percentage	comments *
Institutional requirements	00	000	000 %	
College requirements	00	000	000 %	
Department requirements	00	000	000 %	
Summer training	0	Complete	Complete	
Other				

* The notes may include whether the course is core or elective.

7. Program Description				
Year / Level	Course code or Course	Course name	Credit Hours	
			theoretical	practical
First academic year / Autumn season		Agricultural tractors	2	4
		General soil	2	3
		plant production	2	3
		Animal production	2	2
		engineering drawing	_	4
		Democracy and human rights	2	_
First academic year / Spring season		Internal combustion engines	2	4
		coefficient	_	8
		Soil preparation equipment	2	3
		mathematics	3	_
		flat area and topography	2	3
		Industrial drawing	_	4
		Computers and Artificial Intelligence (1)	2	4
		English language (1)	2	_
Second academic year / Autumn season		Agricultural tractor maintenance	1	3
		Transmission systems	2	3
		Electrical agricultural machinery	2	3
		Irrigation equipment	2	2
		Hydraulic agricultural machinery	2	3
		Planting and crop service equipment	1	3
		Crimes of the Ba'ath regime	2	-
Second academic year / Spring season		Agricultural tractor repair	1	3
		Harvesting and harvesting machines	2	3
		Animal production mechanization	1	3
		Economics of agricultural mechanization	2	1
		Reclamation machinery and equipment	2	3
		Principles of using machines	2	3
		Graduation research project	4	_
		Computers and Artificial Intelligence (2)	2	4
		English language (2)	2	_

8.Expected learning outcomes of the program	
Knowledge	
A1- Knowledge of the types of agricultural machinery and equipment. A2- Knowledge of the types of agricultural tractors. A3- Knowledge of the parts of the hydraulic system in the tractor. A4- Knowledge of the types of equipment used in the field of turning and milling. A5- Knowledge of the types of heavy equipment. A6- Knowledge of the types of equipment used in mechanizing animal production	
Skills	
B1 – Driving agricultural tractors B2 - Calibrating the seed drills and calculating the quantity of seeds required per unit area according to the type of seed. B3 - Estimating the density of the electrolyte.	
Values	
Written tests, term exams, final exams, daily assessment.	

9.Teaching and learning strategies
Lecture, workshop, laboratory, summer training

00. Assessment Methods
Written tests, term exams, final exams, daily assessment.

00. Faculty

Faculty members

academic rank	Specialization		Requirements/Skills Private (if applicable)		Faculty preparation	
	general	private			angel	lecturer
teacher	engineering	Mechanic			1	
teacher	engineering agricultural	Agricultural mechanization			2	
teacher	sciences	physics			1	
Assistant teacher	engineering agricultural	Agricultural mechanization			1	
Assistant teacher	engineering agricultural	Plant protection			1	

Professional Development
Orienting new faculty members
1. Teaching skills and the ability to cover various subjects efficiently. 2. Commitment to work hours and office hours. 3. Preparing teaching materials. 4. Working as a team. 5- Feedback through the peer-to-peer evaluation process.
Professional development of faculty members
1- Research activity. 2. Participation and interaction in departmental committees and meetings. 3. Participation in scientific activities. 4- The ability to develop scientific and research skills.

12.**Admission standard**
Central acceptance

13.**Key sources of information about the program**
https://ims.atu.edu.iq/?page_id=6230

14. Program development plan
1. Conduct workshops to train faculty members. 2. Review the curriculum content descriptions in accordance with learning outcomes. 3. Submit the program and course materials for external review. 4. Review learning policies in light of the results of some exams.

Program Skills Plan															
				Learning outcomes required from the program											
Year / Level	code The course	Course Name	Basic or optional	Knowledge				Skills				Values			
				A1	A2	A3	A4	B1	B2	B	B4	Part 1	Part 2	Part 3	Q4
First academic year / Autumn season		Agricultural tractors	essential			*			*				*		
		General soil	essential		*					*		*			
		plant production	essential				* *						*		
		Animal production	essential				*		*				*		
		engineering drawing	essential	*					*				*		
		Democracy and human rights	essential				* *							*	
First academic year / Spring season		Internal combustion engines	essential		*					*				*	
		coefficient	essential			*				*			*		
		Soil preparation equipment	essential		*				*				*		
		mathematics	essential		*				*					*	
		flat area and topography	essential	*				*				*			
		Industrial drawing	essential	*				*							*
		Computer artificial intelligence (1)	essential		*						*	*			
		English language (1)	essential		*				*				*		
Second academic year / Autumn season		Agricultural tractor maintenance	essential		*					*			*		
		Transmission systems	essential	*					*				*		

		Electrical agricultural machinery	essential			*			*					*	
		Irrigation equipment	essential		*				*			*			
		Hydraulic agricultural machinery	essential		*					*		*			
		Agricultural and service equipment crop	essential			*		*						*	
		Crimes of the Ba'ath regime	essential			*		*							*
Second academic year / Spring season		Agricultural tractor repair	essential			*		*				*			
		Harvesting and harvesting machines	essential		*				*				*		
		Animal production mechanization	essential	*					*				*		
		Economics of agricultural mechanization	essential	*				*				*			
		Reclamation machinery and equipment	essential		*						*	*			
		Principles of using machines	essential	*					*				*		*
		Graduation research project	essential		*				*				*		
		Computers and Artificial Intelligence (2)	essential			*				*				*	
		English language (2)	essential			*				*			*		

- Please check the boxes corresponding to the individual learning outcomes from the program that are being assessed.

Course description template

1. Course Name: Agricultural Tractors
2. Course code: AMT11130CM
3. Term/Year: First Term/First Year
4. Date this description was prepared: 2026/8/6
5. Available attendance formats: Attending a lecture
6. Total study hours / Total unit hours: 6 hours / 6 unit hours
7. Name of the course coordinator (if there is more than one, mention it).
Name: M. M. Abbas Fadel Abdul Email:Abbas.fadhil1983.ism@atu.edu.iq
8. Course Objectives

Course objectives Study	- Explaining the meaning of an agricultural tractor and how to repair it. - Identifying the types of maintenance and how to perform them in the field. - Enabling the student to use the agricultural tractor and to diagnose and repair faults. - Introducing the student to the systems present in the agricultural tractor and those it relies on The machine is running.
9. Teaching and learning strategies	
strategy	1. Identifying the types of systems in an agricultural tractor. 2. Identifying the engine components in an agricultural tractor. 3. Identifying the power transmission methods in an agricultural tractor. 4. Identifying the types of maintenance performed.

00. Course Structure					
Week	**Hours**	**Required learning outcomes**	**Unit name or the topic**	**Learning method**	**Evaluation Method**
the first	6	Identifying the types Pullers	The importance of mechanization - Types of agricultural tractors	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the second	6	Identifying the parts The main function of the tug every part	Main parts For agricultural tractors	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the third	6	Identifying human capabilities In heat tolerance Noise - requirements Driving space	The impact of the human factor in Tractor design	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fourth	6	Understanding the relationship between soil and tractor by understanding slippage and its mechanics soil	Pull theory	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth	6	Understanding the effect of weight Pulling on the process Pulling and overcoming Roll resistance	Rolling resistance - The effect of weight on withdrawals	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Sixth	6	Understanding how weights are distributed and balance is achieved - assign moment of inertia	eTnractor structure mechanics	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Seventh	6	Identifying methods of appointment tug center of gravity	Center of gravity and how Finding it	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Eighth	6	Identifying the parts electrical system And the function of each part in it	electrical system	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Ninth	6	Understanding the parts of an electric generator and its operating principle	The generator, its parts, and theory currency	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
tenth	6	Understanding the means of power transmission - gearbox - The separator	Means of transport	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
atheistic ten	6	Identifying the parts Main system Hydraulics and types The pumps used in it	Hydraulic system	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

twelfth	6	Identifying the parts Main components of the rotation device, their functions, and common malfunctions and its maintenance	Rotation device	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
thirteenth	6	Identifying sources The power in the tractor comes from the drag shaft and the device. Hydraulic and column Back office	Sources of power in The tug	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
fourteenth	6	Identifying types of ability The one coming out of the tug And how to measure it	Puller tests – Methods of calculating power	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth ten	6	Agricultural tractor maintenance And preparing it for work	Tractor maintenance methods agricultural	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

11. Course Evaluation
The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

12. Learning and teaching resources	
Required textbooks (methodology, if applicable)	General principles of agricultural tractors
Main references (sources)	General principles of agricultural tractors
Recommended supporting books and references (scientific journals, reports...)	A collection of books on agricultural tractor maintenance and their types.
Electronic references, websites	Checking out websites in this field

13.	Course Name: Coefficient
14.	Course Code: AMT11230CM
15.	Term/Year: First Term/First Year
16.	Date this description was prepared: 2026/8/6
17.	Available forms of attendance: Workshops
18.	Total study hours/total units: 4 hours/4 units
19.	Name of the course coordinator (if there is more than one, please mention it).
Name: M.D. Intisar Mohammed Khudair	Email: intesar.mohammed@atu.edu.iq
20.	Course objectives
Course objectives Study	- Training the student on types and methods of welding to benefit from them in the repair of equipment and machinery. - Introducing and training the student on the components of welding equipment and how to use them. - The student will be able to perform various welding operations using gas welding, gas cutting, and electric arc welding in its various forms. -
21.	Teaching and learning strategies
strategy	5. Learning about welding methods. 6. Practical application of welding methods. 7. Understanding general safety procedures in workshops. 8. Familiarizing oneself with different measuring instruments.

22. Course Structure

Week	Hours	Required learning outcomes	Unit name or the topic	Learning method	Evaluation Method
the first	4	Identifying the welding machine (Oxyacetylene) - Device components - How to read and regulate readings The device – how to obtain the appropriate flame How to use a welding torch The cutting head	Oxy-welding machine Acetylene) - Device components - How to read and adjust device parameters - How to get The right torch - how to use a welding torch The cutting head	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the second	4	Identifying a practical exercise On welding and leakage Gas in a straight line Using iron wires And Bras - How to use a welding torch - the correct grip on the handle and how Welding	Practical exercise on Welding and gas leakage In a straight line using Iron and brass wires - How to use a torch Welding grip Correct for handle And how to weld.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the third	4	Identifying a practical exercise On welding and deposition (With gas in the shape of a letter using iron wires) V And geckos	Practical exercise on Welding and gas deposition Shaped like the letter V using iron wires And geckos	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fourth	4	Identifying a practical exercise On welding and deposition (Gas in the shape of a letter) L).	Practical exercise on Welding and gas deposition In the shape of the letter (L) .	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth	4	Learning a practical exercise on gas cutting - how to Cutting metal pieces – using the cutting head	Practical exercise on Gas cutting – How to cut metal pieces – using a cutting head	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Sixth	4	Learn about a practical exercise on gas cutting using Routing tools - How to cut straight with a gas .	Practical exercise on Gas cutting using Guidance tools - how to Gas cutting Straight	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Seventh	4	Identifying the welding machine By electric arc Identifying the device and the electric current generators The fixed and working With the motor - learn about the poles, the wire, and its relationship Electric current - and types wires	Arc welding machine Electrician - Identification On the device and on Current generators Fixed electrical and It is powered by an engine. Learn about the poles The wire and its relationship to the curr nt Electrician - Types wires	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Eighth	4	Learning a practical exercise on welding and deposition	Practical exercise on Welding and deposition	Lecture The workshop	Written tests Term exams

		electric arc line Straight using wires Iron suitable for current	electric arc line Straight using wires Iron suitable for current	laboratory Summer training	Final exams Daily assessment
Ninth	**4**	Identifying a practical exercise On welding and deposition By electric arc Zigzag using wires Suitable iron	Practical exercise on Welding and deposition electric arc In a zigzag pattern using Suitable iron wires	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
tenth	**4**	Identifying a practical exercise On welding and deposition By electric arc oval using wires Iron suitable for current	Practical exercise on Welding and deposition electric arc In an oval shape using Suitable iron wires For the current	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
atheistic ten	**4**	Identifying a practical exercise On welding and deposition By electric arc Using the letter V Iron wires suitable for current	Practical exercise on Welding and deposition electric arc In the shape of the letter (V) Using iron wires Suitable for the current	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
twelfth	**4**	Identifying a practical exercise On welding and deposition By electric arc Using the letter L, suitable iron wires	Practical exercise on Welding and deposition electric arc In the shape of the letter (L) Using iron wires . suitable	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
thirteenth	**4**	Identifying a practical exercise On welding and deposition electric arc welding . corner)	Practical exercise on Welding and deposition By electric arc Angle welding	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
fourteenth	**4**	Identifying a practical exercise On welding and deposition electric arc welding My head	Practical exercise on Welding and deposition By electric arc Vertical welding	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth ten	**4**	Identifying a practical exercise Welding two pieces together (using an electric arc)) .	Practical welding exercise Two pieces together (by electric arc).	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

23. Course Evaluation

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

24. Learning and teaching resources

Required textbooks (methodology, if applicable)	
Main references (sources)	
Recommended supporting books and references (scientific journals, reports...)	
Electronic references, websites	Checking out websites in this field

25.	Course Name: General Soil
26.	Course code: AMT11330CM
27.	Term/Year: First Term/First Year
28.	Date this description was prepared: 2026/8/6
29.	Available attendance formats: Attending a lecture
30.	Total study hours/total units: 5 hours/5 units
31.	Name of the course coordinator (if there is more than one, please mention it).
Name: M.D. Mustafa Hassan Wariush	Email:Wr.mustafa@atu.edu.iq
32.	Course objectives
Course objectives Study	- Identifying the nature and properties of soil as a medium for the activity of various agricultural mechanization activities and creating a suitable seedbed. - The possibility of analyzing soil properties to determine the type and size of agricultural machinery needed to serve the crop.
33.	Teaching and learning strategies
strategy	9. To learn about soil science. 10. Identifying the rocks that form the soil. 11- Understanding the physical properties of the soil. 12- Identifying the different types of soil layers.

03. Course Structure					
Week	**Hours**	**Required learning outcomes**	**Unit name or the topic**	**Learning method**	**Evaluation Method**
the first	5	Introduction to soil science	Soil science - its definition Its branches - value Applied	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the second	5	Rock identification The parent material	The rocks that make up the material the mom	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the third	5	Identifying the characteristics Soil physical properties - density Al-Zahiriyah	Study of traits Soil physics apparent density	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fourth	5	Density identification The true soil	True density	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth	5	soil porosity	soil porosity	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Sixth	5	Soil texture	Soil texture	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Seventh	5	Identifying methods for measuring soil water and soil temperature	Soil water - heat soil	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Eighth	5	Soil air identification	soil air	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Ninth	5	Identifying salinity soil	soil salinity	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
tenth	5	Identifying fertility Soil - Soil fertilization	Soil fertility - fertilization soil	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
eleventh	5	Identifying the material Soil organic matter	organic matter in soil	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

twelfth	5	Identifying the signs Soil morphology	Morphological evidence For the soil	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
thirteenth	5	Identifying differentiation Its layers and complex composition Soil and its development	Differentiation of its layers and formation Soil complex and its development	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
fourteenth	5	Identifying types of color soil	Soil color study	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
fifteenth	5	Identifying the classification General Soil	General classification of soil	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

35. Course Evaluation

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

36. Learning and teaching resources

Required textbooks (methodology, if applicable)	General principles of soil
Main references (sources)	General principles of soil
Recommended supporting books and references (scientific journals, reports...)	A collection of books in the field of general soil science
Electronic references, websites	Checking out websites in this field

37.	Course Name: Plant Production
38.	Course Code: AMT11430CM
39.	Term/Year: First Term/First Year
40.	Date this description was prepared: 2026/8/6
41.	Available attendance formats: Attending a lecture
42.	Total study hours/total units: 5 hours/5 units
43.	Name of the course coordinator (if there is more than one, please mention it).
Name: M. M. Mahmoud Othman Abbas	Email:
44.	Course objectives
Course objectives Study	- The student will be able to understand the importance of crops and horticulture, and the production of various horticultural crops such as vegetables and fruits, as well as field crops such as grains, legumes, oil crops, and industrial crops. - The student's knowledge of field applications in the cultivation of grain crops and horticultural crops.
45.	Teaching and learning strategies
strategy	13- Identifying different types of field crops. 14- Understanding soil management practices. 15- Learning about plant propagation methods. 16- Understanding the basic principles of garden and park planning.

36. Course Structure

Week	Hours	Required learning outcomes	Unit name or the topic	Learning method	Evaluation Method
the first	5	Crop identification Field and crop division Field	field crop crop division Field	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the second	5	Identifying processes Soil preparation/tillage - its importance - when to perform it - smoothing - leveling - adjustment	Soil preparation/tillage operations - their importance - when to carry them out - smoothing Settlement - Amendment	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the third	5	Learning about cultivation methods Crops - Patching Weeding - Thinning - Fertilizing - Irrigation - Pest Control	Cultivation methods Crops - Patching And weeding - thinning - Fertilization - Irrigation - Combating	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fourth	5	crop identification Grains - Wheat - barley	Grain crops - Wheat - Barley	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth	5	crop identification Grains - Yellow Corn Rice	Grain crops - Yellow corn - rice	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Sixth	5	Crop identification Oil - Cotton - Flower The sun	Oil crops - Cotton - Sunflower	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Seventh	5	Crop identification Legumes - Alfalfa - Clover	Legume crops - Alfalfa	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Eighth	5	Crop identification Legumes - Broad beans - Lentils	Legume crops - Broad beans - Lentils	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Ninth	5	Identifying the impact of environmental and soil factors on horticultural crop production	Impact of environmental factors Soil factors on Crop production The gardener	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
tenth	5	Understanding the methods of propagating horticultural plants, including: 1- Sexual propagation 2- Propagation asexual	Methods of plant propagation Gardening includes 1- Sexual reproduction 2- Asexual reproduction	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
atheistic ten	5	Understanding and producing seedlings - Benefits of seedlings - The effect of seedlings on growth plants	Seedlings and Seedling Production Benefits of transplanting - The effect of transplanting on plant growth	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

twelfth	**5**	Getting to know how to create Fruit orchards	Establishing fruit orchards	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
thirteenth	**5**	Learning about training and pruning fruit trees	Tree cultivation and pruning fruit	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
fourteenth	**5**	Identifying the production Citrus fruits	Citrus production	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth ten	**5**	Getting to know the rules Basics in planning Gardens and parks	Basic rules in Garden planning and parks	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

44. Course Evaluation

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

44. Learning and teaching resources

Required textbooks (methodology, if applicable)	General principles of plant production
Main references (sources)	General principles of plant production
Recommended supporting books and references (scientific journals, reports...)	A collection of books in the field of plant production
Electronic references, websites	Checking out websites in this field

49.	Course Name: Animal Production
50.	Course code: AMT11530CM
51.	Term/Year: First Term/First Year
52.	Date this description was prepared: 2026/8/6
53.	Available attendance formats: Attending a lecture
54.	Total study hours/total units: 4 hours/4 units
55.	Name of the course coordinator (if there is more than one, please mention it).
Name: Dr. Abdul Hussein Hamza	Email:**im.abd4 @atu.edu.iq**
56.	Course objectives
Course objectives Study	- Teaching the student about raising farm animals (sheep and cows) as well as poultry in terms of barns, management, proper nutrition, and the purpose of this study. - Introducing the student to the economic importance of farm animals. - The student will be introduced to the types of farm animals, types of fields, breeding, and nutrition. The student will be - trained on the components of the fields, including equipment, tools, machinery, field operations, and how to perform them. The student will also be introduced to and trained on record-keeping.
57.	Teaching and learning strategies
strategy	17- Understanding the economic importance of birds. 18- Understanding poultry production processes. 19- Understanding methods of meat production. 20- Understanding the basic rules in hatching operations.

88. Course Structure

Week	Hours	Required learning outcomes	Unit name or the topic	Learning method	Evaluation Method
the first	5	Recognizing the importance The economics of poultry farming - the poultry industry Poultry farming in Iraq	Economic importance For raising domestic birds Poultry industry . . in Iraq	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the second	5	Identifying types of production In poultry - unloading - incubation - supplies Poultry farming	Types of production in Poultry - Unloading Nursery - Supplies Poultry farming	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the third	5	Understanding egg production – Egg-laying hen breeds – Egg-laying hen rearing systems – Factors affecting production Eggs	Egg production - breeds Egg-laying hens - Egg-laying hens farming systems - Factors affecting Egg production	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fourth	5	Understanding meat production Broiler chicken breeds Broiler chicken farming requirements Factors affecting the economic characteristics of broiler chickens Meat	Meat production - Broiler chicken breeds - Broiler rearing requirements Factors affecting Economic characteristics For chicken meat	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth	5	Identifying hatching And he managed the hatcheries - the hatche y Hatching machine	Hatching and hatchery management Hatching machine Hatching	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Sixth	5	Identifying the factors that It affects the quality of hatching eggs - egg specifications Suitable for hatching	Factors that affect the quality of hatching eggs egg specifications Suitable for hatching	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Seventh	5	The economic importance of sheep Identifying	Economic importance For sheep	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Eighth	5	Identifying the classification Sheep - Sheep Breeds Global	Sheep classification Global sheep breeds .	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Ninth	5	Reproductive identification Pregnancy and birth in sheep .	Reproduction - Pregnancy Lambing in sheep	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
tenth	5	Understanding milk production Wool production in Sheep	Milk production and production Wool in sheep	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
atheistic ten	5	Identifying breeds Goats - Goat breeding	Goat breeds - breeding Goats	Lecture The workshop laboratory	Written tests Term exams Final exams

				Summer training	Daily assessment
twelfth	**5**	Recognizing the importance The economics of cows	Economic importance For cows	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
thirteenth	**5**	Identifying the classification Cows and their types.	Classification of cows And its types	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
fourteenth	**5**	Understanding the basics of milk and meat production in cows.	Principles of milk production And the meat in cows	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth ten	**5**	Understanding Field Management Cows.	Managing cattle farms.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

59. Course Evaluation

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

66. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	General principles of animal production
Main references (sources)	General principles of animal production
Recommended supporting books and references (scientific journals, reports...)	A collection of books in the field of animal production
Electronic references, websites	Checking out websites in this field

61.	Course Name: Engineering Drawing
62.	Course code: AMT11630CM
63.	Term/Year: First Term/First Year
64.	Date this description was prepared: 2026/8/6
65.	Available attendance formats: Lecture attendance – Computer lab
66.	Total study hours/total units: 4 hours/4 units
67.	Name of the course coordinator (if there is more than one, please mention it).
Name: M.D. Mina Musaher Alwan	Email:mena.alwan@atu.edu.iq
68.	Course objectives
Course objectives Study	- Explaining the importance of engineering drawing - introducing the student to simple engineering operations and training him to project geometric objects and draw three-dimensional objects using the AutoCAD program. - This course introduces students to the importance of engineering drawing using AutoCAD software. It also - trains students in performing engineering operations using computer programs.
69.	Teaching and learning strategies
strategy	21- Introduction to AutoCAD software. Understanding the 22- drawing processes within the software. 23- Understanding meat production methods. 24- Understanding the basic rules in hatching operations.

70. Course Structure

Week	Hours	Required learning outcomes	Unit name or the topic	Learning method	Evaluation Method
the first	4	Getting acquainted with the drawing program AutoCAD interface The program - tapes Tools - through the two AutoCAD program windows 2000 - 2008 - Selecting Units and Angles - Paper Organization - Paper Selection - Helpful Commands - Drawing Precision Tools - Grid - Jumping	Learn about the program AutoCAD drawing - Program interface - Toolbars - through the program's two windows AutoCAD 2000 - 2008 - Selecting units And the corners - organization Paper - Paper identification - Helpful commands - Drawing precision tools. - Grid - Jump	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the second	4	Identifying input methods Coordinates - Operations Modify the drawing - scale - print and output (Modify) Fees	Methods for entering coordinates Modify operations Drawing - Scale Printing and layout Fees	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the third	4	Identifying the types Lines in drawing Geometric - Changing the shapes, colors, and thickness of lines Adding text to the drawing - Drawing lines of all types - Dividing a straight line - Erecting columns - Dividing angles - drawing geometric shapes and sketching Two-dimensional (2D) Accurate drawing	Types of fonts in Engineering drawing - change Line shapes - Its colors and thickness - Adding texts to Drawing - Drawing lines of all types - Dividing the line Straight - Establishment Columns - Dividing corners Drawing shapes Geometric and two-dimensional drawing Dimensions (2D) - Accurate drawing	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fourth	4	Understanding the panel layout Organizing the placement of projections To project geometric objects - The three levels of projection using construction lines - Logical operations (subtraction) - Unification - Intersection) - The three levels of projection	Dividing the board and organizing Setting up projections for projecting Geometric shapes - Projection levels The three using lines Construction - Operations Logic (Subtraction - Unification - Intersection) - Projection levels The three	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth	4	Understanding dimensioning using AutoCAD software	Setting dimensions using AutoCAD program	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Sixth	4	Learn how to draw	How to draw three-dimensional objects (	Lecture	Written tests

		3D models (drawing methods) Projection – Drawing three-dimensional objects using Polar coordinates – Creating 3D extrusion drawings – Changing (by way of) Thinking.	Methods of drawing and projection Drawing three-dimensional objects Using coordinates Polarity – Creating Fees three-dimensional objects Extrusion -- (by way of Change in thinking.	The workshop laboratory Summer training	Term exams Final exams Daily assessment
Seventh	**4**	Identifying cloning The third projection with knowledge Projections – Drawing Projections Information – Reproduction Third projection – drawing the object in a drawing style AutoCAD	Third projection cloning With the knowledge of Muscat – Drawing the known projections Projection cloning Third – Drawing the model using AutoCAD drawing techniques .	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Eighth	**4**	Hatch (Hatching) In its various forms Identifying Its forms	Hatching (In its various types and forms)	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Ninth	**4**	Learn about the creation Sections – An overview of the importance of sections – Non-cuttable parts – Selection Best level for slicing - Command - Slice Command Section	Creating sectors – An overview of the importance of sectors – non-removable parts For cutting – choose the best cutting level - command The command - Slice Section	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
tenth	**4**	Learn about comprehensive exercises Each study has its own application. For the AutoCAD program.	Comprehensive exercises for each subject studied, in application of the program AutoCAD.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
atheistic ten	**4**	Getting acquainted with the drawing program AutoCAD interface The program – tapes Tools – through the two AutoCAD program windows 2000 – 2008 – Selecting Units and Angles – Paper Organization – Paper Selection – Helpful Commands – Drawing Precision Tools – Grid – Jumping	Learn about the program AutoCAD drawing – Program interface – Toolbars – through the program's two windows AutoCAD 2000 – 2008 – Selecting units And the corners - organization Paper – Paper identification – Helpful commands – Drawing precision tools. – Grid – Jump	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
twelfth	**4**	Identifying input methods Coordinates – Operations Modify the drawing – scale – print and output (Modify) Fees	Methods for entering coordinates Modify operations Drawing – Scale Printing and layout Fees	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
thirteenth	**4**	Identifying the types Lines in drawing Geometric – Changing the shapes, colors, and thickness of lines	Types of fonts in Engineering drawing – change Line shapes – Its colors and thickness –	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

		Adding text to the drawing – Drawing lines of all types – Dividing a straight line – Erecting columns – Dividing angles – drawing geometric shapes and sketching Two-dimensional (2D) Accurate drawing	Adding texts to Drawing – Drawing lines of all types – Dividing the line Straight – Establishment Columns – Dividing corners Drawing shapes Geometric and two-dimensional drawing Dimensions (2D) – Accurate drawing		
fourteenth	**4**	Understanding the panel layout Organizing the placement of projections To project geometric objects – The three levels of projection using construction lines – Logical operations (subtraction) – Unification – Intersection) – The three levels of projection	Dividing the board and organizing Setting up projections for projecting Geometric shapes – Projection levels The three using lines Construction – Operations Logic (Subtraction – Unification – Intersection) – Projection levels The three	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth ten	**4**	Understanding dimensioning using AutoCAD software	Setting dimensions using AutoCAD program	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

41. Course Evaluation

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

42. Learning and teaching resources

Required textbooks (methodology, if applicable)	General principles of engineering drawing
Main references (sources)	General principles of engineering drawing
Recommended supporting books and references (scientific journals, reports...)	A collection of books in the field of engineering drawing
Electronic references, websites	Checking out websites in this field

Course description template

Course name:
Computers and Artificial Intelligence
Course code:
ATU12
Chapter/Year:
First semester / First year
Date this description was prepared:
2026-2-15
Available attendance formats:
My attendance is according to the weekly schedule.
Total study hours/total units: 2 hours/2 units
Name of the course coordinator (if there is more than one, please state):
M.M. Walaa Hussein Email: walaa.allawi@atu.edu.iq

Course objectives	- Introducing the student to electronic computers, their importance, how they work, their components, and how to set them up To handle the computer and train him to perform or participate in application programs in the field of specialization. - The student works on the computer, enters data, and obtains results. -
Course objectives	1. Identifying the computer's components. 2. Understanding operating system commands. 3. Understanding computer control panels. 4. Understanding the Paint program.

Study

	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
	6	Understanding the definition The calculator – generations of calculators - Physical components and software	Definition of a calculator - Generations Calculator - Components Hardware and software	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Introducing students to The Internet Local networks And global and sites and browsers Research centers and computers	6	Understanding the operating system MS-DOS concept System, system signal, Discs, evidence And its levels, files, Internal orders Foreign Ministry	MS-DOS operating system System concept, system signal, disks, directories and their levels, files Internal orders Foreign Ministry	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

cloud					
Strategies Education and learning	6	Getting to know System commands Internal and external operations Internal and External commands	Orders Operating system Interior And the external Internal and External commands	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
strategy	6	Understanding the operating system Windows System concept, advantages, Basic requirements, Operating system, Desktop components The concept of icons, and how to interact with the mouse. Importance of Mouse Taskbar components Start menu, Task Bar Exit Start System. Working with desktop icons, working with icon components. From My Computer Where disks, folders, files Disk formatting, copying files and folders Utilizing the processes of cutting and pasting Recycle Bin, Handling the Trash Bin, Paste How to delete and recover files.	Windows operating system Windows concept System, advantages, basic requirements Operating system, Desktop components The concept of an icon The method of dealing with The importance of the mouse and the components of the taskbar Start menu Task Bar Exiting the system Start menu. Dealing with Desktop icons, Dealing with components My Computer icon In terms of discs, Folders File Formatting Disks, Copy files, Copy folders Taking advantage of processes Paste and Cut Handling and Paste with the trash can Recycle Bin How to delete files And its retrieval	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
2 - Getting to know Status bar commands The title and how Mold making and documents and implementing the orde On it.	6	Understanding the benefits of Control Panel Programs Control Panel Change desktop background, control screen saver. Adding and removing programs to Start menu Add and Remove Program.	Utilizing dashboard programs Control Change the desktop panel background, control In screen saver Screen Saver Add and remove programs Add to Start Menu and Remove Program.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
3 - Identifying The Internet Local networks And global and sites and browsers	6	Utilizing the Run command in program execution Directly,	Utilizing the Run command in program execution Directly,	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

Research centers and computers cloud					
	6	Understanding the use Windows entertainment programs media player Taking advantage of the programs Additional Accessories Using a calculator Calculator.	Using entertainment programs Window media Taking advantage of additional player programs Accessories Using a calculator Calculator.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Course structure	6	Learn how to use the Paint drawing program to create, save, and retrieve files. Fees. Working with Office applications. How to get Help.	Working with the Paint drawing program to create and save files And refund the fees. Dealing with applications How to. Office Get help Help.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Week	6	Understanding the concept Computer viruses, how to Injury, types Viruses, how to Addressing and dealing with it using antivirus software Anti-Viruses.	The concept of a computer virus How to get infected, types of viruses, how Treating and dealing with it In using software Anti-Viruses.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
1					
2					
laboratory					

	General Principles of Computers
semester exams	General Principles of Computers
Final exams	A collection of books in the field of computers
Daily assessment	Accessing websites in the field

Course description template

Course name:	
Human rights and democracy	
Course code	
ATU13	
Semester/Year	
First semester / First year	
Date this description was prepared	
0206-8-6	
Available forms of attendance	
My attendance is mandatory weekly	
Number of study hours (total) / Number of units (total)	
0 hours / 0 units	
Name of the course coordinator (if there is more than one, please mention it).	
Name: M.M. Mustafa Ahmed Abdel	**Email:**
Course objectives	
Course Objectives: • To introd	**uce students to the basic concepts of human rights and democracy, their historical origins and development Intellectual and legal.** **• A statement of the interactive relationship between human rights and the democratic system, and the role of each in consolidating the other.** **• Enabling students to become familiar with fundamental rights and freedoms (civil, political, economic, socio-cultural).** **• Promoting the values of citizenship, the rule of law, political participation, tolerance and acceptance of others.**
Teaching and learning strategies	
strategy	**1. To understand the basic concepts of human rights and democracy. 2. To understand the relationship between human rights and the democratic system. 3. To understand fundamental freedoms.** **4 – Understanding the values of citizenship and the rule of law**

Course structure

Week	Hours	Learning outcomes Required	Unit or topic name	Learning method	Evaluation Method
1	0n	Getting to know The concept of rights man	The concept of human rights	Lecture	Questions General and discussion
2	0n	Understanding the stages Historical origins and the development of rights man	International Bill of Human Rights	Lecture	Questions General and discussion + Exam that I
3	0n	Getting to know	Women's, children's, minority, and disabled rights	Lecture	Duties

		Women's rights and the child	Disability in international conventions		collective + Exam that I
4	0n	Distinguishing between mecha nisms National and international To protect rights man	National mechanisms and procedures for implementing special or group rights	Lecture	Questions General and discussion or exam that I
5	0n	Getting to know human rights violations man	gross human rights violations	Lecture	Questions General and discussion
6	0n	Distinguishing between human rights violations Man before the year 0223 and beyond	For gross human rights violations in Iraq	Lecture	Duties collective + Discussion
7	0n	Understanding the role of the council human rights International	council rights man and mech nism Universal Periodic Review	Lecture	Questions General
8	exam monthly				exam monthly
9	0n	Getting to know International mechanisms Regional rights man	International and regional mechanisms for the protection of human rights and means of accountability	Lecture	Questions Generally, and fro us straw
10	0n	Getting to know concept Democracy	Historical concepts of the emergence and foundations of democracy	Lecture	Questions General
11	0n	Understanding how it evolved Democracy	Patterns of democracy and their development in contemporary contexts	Lecture	discussion ar d An exam
12	0n	Understanding the principle Separation of powers and its balance	Separation of powers and principles of democratic governance	Lecture	Questions General and discussion
13	0n	Getting to know What are political parties? Political	Political parties	Lecture	Duties Group+ discussion
14	0n	Getting to know The relationship between Democracy and freedoms	The relationship between democracy and public freedoms	Lecture	Discussion and exam that I
15	exam monthly				exam monthly

Course evaluation

The assessment is done through:

1- Participation in the classroom.

0- Presenting the activities.
3-Midterm and final exams and activities.
Learning and teaching resources
Required textbooks (methodology, if applicable) Curriculum approved by the Ministry of Higher Education 0212
Main references (sources)
Recommended supporting books and references (scientific journals, reports...) Reports of the High Commissioner for Human Rights
Electronic references, websites Reports from global human rights organizations

Course description template

Course name:
English Language 1
Course code
ATU10
Chapter/Year
First semester (autumn) / First year
Date this description was prepared
0206-8-6
Available forms of attendance
My attendance is mandatory weekly
Total number of study hours (/) Total number of units (
0 hours / unit
Name of the course coordinator (if there is more than one, please mention it).
the name : M. M. Zaid Talib Shamran Email: zaid.shamran@atu.edu.iq
Course objectives

Course objectives	• To provide the student with information that enables him to understand the rules of the English language. • Recognizing the importance of the English language. • Training the student to use English words and sentences. • Gradually introducing the student to the technical terminology related to the specialization.
Teaching and learning strategies	
strategy	• Lectures • Video presentation • Homework • Conducting dialogues between students

Course structure

Week	Hours	outputs Learning Required	Unit or topic name	road Learning	Evaluation Method
1	0	Getting to know	are Hello, (am	Lecture	semester exams

		How to make peace and the conversation	(is), How are you? Good Morning,	And the solution Problems	Final exams Daily assessment
2	0	Getting to know Reading and writing preparation	s' this in What English This Numbers 1-10 is	Lecture And the solution Problems	semester exams Final exams Daily assessment
3	0	Getting to know Ownership tools	world Your she, countries (he) s' he from . they, his, her) where	Lecture And the solution Problems	semester exams Final exams Daily assessment
4	0	Getting to know Reading and writing preparation	awful Fantastic, Numbers beautiful) 11-30	Lecture And the solution Problems	Exams and Practical Report
5	0	Getting to know Question Correct	All about you, Jobs are (am) and Negatives question	Lecture And the solution Problems	semester exams Final exams Daily assessment
6	0	Getting to know Question Correct	Personal information social expressions.	Lecture And the solution Problems	semester exams Final exams Daily assessment
7	0	Getting to know Ownership tools	and family My ,their) friends, (our possessive s'.	Lecture And the solution Problems	semester exams Final exams Daily assessment
8+ 9	0	Getting to know Question Correct	,has , The has alphabet.	Lecture And the solution Problems	semester exams Final exams Daily assessment
12	0	Getting to know Present tense Simple	drinks,(The way I live, sports food simple- I , present you, we, they.	Lecture And the solution Problems	semester exams Final exams Daily assessment
11	0	Getting to know Knowledge and indefinite ness	Languages and nationalities and prices. (A,an) Numbers	Lecture And the solution Problems	semester exams Final exams Daily assessment
10	0	Getting to know Use Times	(Always, sometimes Every day, the time, Never.	Lecture And the solution Problems	semester exams Final exams Daily assessment
13	0	Getting to know Use Times	My favorites, Question words, (me (him, us, them)	Lecture And the solution Problems	semester exams Final exams Daily assessment
14	0	Getting to know Use Times	, That This Adjectives, Can I	Lecture And the solution Problems	semester exams Final exams Daily assessment
12	0	Getting to know	Where I live, Rooms	Lecture	semester exams

		Use Times	and Furniture	And the solution Problems	Final exams Daily assessment

Course evaluation

The assessment out of 122 consists of daily tests, weekly activities, monthly tests, assignments and the final exam (22% coursework and 22% final exam).

Learning and teaching resources

Required textbooks (methodology, if applicable): Beginner workbook new headway

Main references (sources)

Recommended supporting books and references (scientific journals, reports...)

Fourth edition John, Liz Soars Mike Sayer, Head way, of "English Course", Ox ford University,

Course description template

Course name:

Arabic language /1

Course code / Version number / 20

ATU11

Semester/Year

First semester / First year

Date this description was prepared

0206/8/6

Available forms of attendance

In-person attendance in the classroom + blended learning

Number of study hours (total) / Number of units (total)

0 hours / 0 units

Name of the course coordinator (if there is more than one, please mention it).

Name: Dr. Noha Abdel Rasoul Email:

Course objectives

The subject matter	General objective: To provide the student with the rules of grammar and morphology and to identify the names of Arabian bear. the people of the Arabic language. Specific objective: To provide the student with the ability to correctly And identifying the habitats of the Jam pronounce Arabic words.

Teaching and learning strategies

Strategy	The lecture utilized a whiteboard, projector screen, and training materials. Diverse management, Discussions took place among the students.

Course structure

week	Hours	Learning outcomes Required	Unit name or the topic	Learning method	Evaluation
1	0 N	Understanding the meanings of the verse and the wisdom behind it for With the preservation of part of the Holy Quran is a secret	Surah Al-Baqarah from -260 263	inside The hall My presence	The evaluation and observation The answer. Answer to questions

					During the Harmful.
2	0 N	Searching for the cause of Z And the talk The Sharif	From the Prophetic H a d i t Y The Sharif I was sent only to perfect m Makarem Ethics).	inside The hall My presence	The evaluation a n d The answer. Answer C t Q O uestions During the Harmful.
3	0 N	The student's ability to F What is it? Arabic literature and its r o o t s a Rad h The real	Arabic Literature: BeginniVnegrses of Literature In the age of ignorance Y	inside The hall My presence	The evaluation a n d The answer. Answer C t Q O uestions During the Harmful.
4	0 N	Memorize the five verses S First From it and knowledge of m Y eanTihngespoem	The Hangings	inside The hall My presence	The evaluation a n d The answer. Answer C t Q O uestions During the Harmful.
5	0 N	Distinguishing between exchaGnrgaemmar	Exchange: The balance N The exchange	inside The hall My presence	The evaluation a n d The answer. Answer C t Q O uestions During the Harmful.
6	0 N	Distinguishing between the To break plural of l and other plurals	The masses in Arabia y	inside The hall My presence	The evaluation a n d The answer. Answer C t Q O uestions During the Harmful.
7	0 N	Enabling the student to Tiron The subject and explanation a Ah, erb. And determining the time of ō h e u e r b e	Attributing the action to afor consciences	inside The hall My presence	The evaluation a n d The answer. Answer C t Q O uestions During the Harmful.
8	0 N	Make the student swear actions to Two basic groups Yin: The correct one that is flaweadnd its origins On the vowel and The defective one Contains a vowel	conjugation m h e r e Health and illness to And detachment and the increase	inside The hall My presence	The evaluation a n d The answer. Answer C t Q O uestions During the Harmful.
9	0 N	Making the student aware F on The word that begins shelf with "Sun" or "Lunar"	Language skills	inside The hall My presence	The evaluation a n d The answer. Answer C t Q O uestions During the Harmful.
12	0 N	Enabling the student to A U s e Dictionaries for accessing the The root Linguistic of the word	Arabic dictionaries	inside The hall My presence	The evaluation a n d The answer. Answer C t Q O uestions During the Harmful.
11	0 N	Make an inventory of m r a n g e things everything mentioned in t h r e A d r o n c u A n t - K e n a r t i .m	Meanings of the words Suspicion in Koran	inside The hall My presence	The evaluation a n d The answer. Answer C t Q O uestions During the Harmful.
10	0 N	Making the student possess ability in Distinguishing between the a r ٔ e l t t e r D ād And distinguishing b e t w e e n m T h a n e y words Among them are Mubarak k a n (d a n (M d b)	From the mistakes A inguistic The rumor	inside The hall My presence	The evaluation a n d The answer. Answer C t Q O uestions During the Harmful.
13	0 N	Making the student possess ability in Distinguishing between A o l l the number when it is counted in individu A a n l s d in the dual	number	inside The hall My presence	The evaluation a n d The answer. Answer C t Q O uestions During the Harmful.

14	0 N	The ability to separate Q When do we put Tanween and when to u s e f t o N N un	Nun and Tan ayneh	inside The hall My presence	The evaluation a M l y d bservation The answer. Answer C t Q O uestions During the Harmful.
12	0 N	Identifying letters F The genitive case: from, on, to, F Y ...etc. The meaning of each letter a pnodsitions Its uses	Meanings of letters F The tractor	inside The hall My presence	The evaluation a M l y d bservation The answer. Answer C t Q O uestions During the Harmful.

11. Course Evaluation

dMidterm exam score 22%
dFinal exam grade 22%

11. Learning and teaching resources

A R Required textbooks (methodology, if applicable)	m N inistry of Higher Education t h t e General Arabic Language for Universities and Technical Institutes, A Prepared by Dr. Safaa Kazem / Dr. Lama Mohammed
A M Main References (Sources)	t h e n Malik t h N e Applied Grammar / Dr. Khalid Abdul Aziz m A A n i Grammar / Dr. Fadhil Al-Samarrai
A R Recommended books and supporting references (scientific journals, A R Reports...	n C Al - Dawah, Journal of the College of Education for Human Sciences, University of Babylon, Iraqi t h A e Scientific
A E Electronic references, websites	A Archive of the Eloquent Forum

Course description template

73.	Course Name: Internal Combustion Engines
74.	Course code: AMT12130CM
75.	Term/Year: Second Term/First Year
76.	Date this description was prepared: 2026/8/6
77.	Available attendance formats: Attending a lecture
78.	Total study hours/total units: 6 hours/6 units
79.	Name of the course coordinator (if there is more than one, please mention it).
Name: Dr. Amir Hassan Hamza	Email:ameer.hassan@atu.edu.iq
80.	Course objectives
Course objectives Study	- Introducing the student to internal combustion engines and their development, engine designs and manufacturing, identifying engine performance and capabilities, and how to operate, use and maintain them. - Introducing the student to engines, their development, designs and classification. Training the student on mathematical calculations in engine performance, its parts, thermal cycles. Introducing the student to combustion in diesel and gasoline engines - turbine engines, Wankel engine and exhaust gas and pollution tests.
81.	Teaching and learning strategies
strategy	5. Understanding the development and design of engines. 6. Understanding the thermal cycles of engines. 7. Understanding methods for calculating engine efficiency. 8. Understanding the types of combustion in engines.

82. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
the first	6	Learning a historical overview About development and design Engines and their classification.	A brief history of development Engine design And its classification.	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment
the second	6	Course Information The ideal and true thermal properties of four-stroke spark ignition (gasoline) engines.	thermal cycles The ideal and the real For ignition engines Four-wheeled (gasoline) The rounds.	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment
the third	6	Course Information Ideal and true thermal For ignition engines four-wheel drive (diesel) The rounds.	thermal cycles The ideal and the real For ignition engines four-wheel drive (diesel) The rounds.	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment
Fourth	6	Course Information The ideal and true thermal properties of gasoline and diesel engines Two-set match.	thermal cycles The ideal and the real For gasoline engines And the diesel engine is a two-stroke.	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment
Fifth	6	Identifying and recognizing Valve timing mechanism Four-stroke and comparison with the pressure-volume curve.	Understanding the timing mechanism four valves Rounds and comparison with Volumetric pressure curve.	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment
Sixth	6	Identifying the parts Stationary and moving parts of the motor Internal combustion.	Fixed parts And the moving engine Internal combustion.	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment
Seventh	6	Identifying measurement Engine performance parameters Internal combustion - (Power output - Power) Brake - Power Friction	Measuring performance indicators combustion engines Internal - (Data Capacity - Brake Capacity) Frictional capacity)	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment
Eighth	6	Identifying the size Sweeping and clearance size- Compression ratio - capacity The engine.	Identifying the size Sweeping and large clearance - ratio Compression - Capacity The engine.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Ninth	6	Identifying the types Efficiencies (mechanical - thermal - volumetric) The work completed in Cylinder - Consumption	Types of competencies (Mechanical - Thermal - Volumetric) - Work Done In the cylinder - qualitative consumption	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment

		Fuel type.	For fuel.		
tenth	6	Identifying friction Lubrication in the engine – mechanical friction in Elbow – Friction The mechanical aspect of the piston – effect Number of episodes.	Friction and lubrication in Engine – Friction The mechanic at the facility – mechanical friction For the piston – the effect of the numb er The episodes.	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment
eleventh	6	Identifying combustion – Combustion in engines Diesel – Combustion in gasoline engines – Stages Combustion.	Combustion – Combustion In diesel engines – combustion in engines Gasoline – Stages Combustion.	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment
twelfth	6	Getting acquainted with the room Combustion – Requirements Basic combustion chamber Goodness – Combustion Chamber Design Principles – Types Combustion chambers.	Combustion chamber – Basic requirements For a good combustion chamber Combustion chamber design principles – Types of combustion chambe s Combustion.	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment
thirteenth	6	Fuel identification – Ignition engine fuel By the can – Octane number of gasoline – Diesel fuel – Cetane count in fuel Diesel.	Fuel – Spark Ignition Engine Fuel – Number octane rating of gasoline – Diesel fuel – the number of cetanes in diesel fuel.	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment
fourteenth	6	Identifying engines Rotational principle of operation – air circulation in the turbine resulting from combustion when constant Pressure – use Turbine engines.	Rotary engines: principle of operation – air circulation in the turbine as a result of combustion When the pressure is constant – use the motors Turbine.	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment
fifteenth	6	Identifying tests Exhaust gases – pollution Gases – compounds Exhaust gases for engines Spark ignition – Exhaust gases from engines Diesel – Controlling and reducing types of exhaust pollution To improve the environment.	Exhaust gas tests Gas pollution – Exhaust gas compounds For spark ignition engines Exhaust gases from diesel engines – Controlling the reduction of types Exhaust pollution to improve the environment.	Lecture The workshop laboratory Training Summer	Written tests Term exams Final exams Daily assessment

43. Course Evaluation

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

44. Learning and teaching resources

Required textbooks (methodology, if applicable)	General principles of engines
Main references (sources)	General principles of engines
Recommended supporting books and references (scientific journals, reports...)	A collection of books on combustion engines

Electronic references, websites	Checking out websites in this field

Course description template

85.	Course Name: Coefficient
86.	Course code: AMT12230CM
87.	Term/Year: Second Term/First Year
88.	Date this description was prepared: 2026/8/6
89.	Available forms of attendance: Workshops
90.	Total study hours/total units: 4 hours/4 units
91.	Name of the course coordinator (if there is more than one, please mention it).
Name: M.D. Intisar Mohammed Khudair	Email:Intisar.mohammed@atu.edu.iq
92.	Course objectives
Course objectives Study	- The student will be able to perform turning and filing operations. - The student will be able to identify the types and physical properties of metals and the methods of filing and turning in the field of repairing agricultural machinery and equipment.
93.	Teaching and learning strategies
strategy	9. Understanding general safety procedures in workshops. 10. Learn about different measuring tools. Learn 11- about different types of files. 12- Understanding lathe operations.

43. Course Structure

Week	Hours	Required learning outcomes	Unit name or the topic	Learning method	Evaluation Method
the first	4	Safety awareness The general public in the workshops Metal forming processes – Definition of filings – Tools Measurement.	Public safety in Workshops - Forming Processes Minerals - Definition The filing system - measuring instrumen ts.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the second	4	Identifying precision measuring instruments - classifying metals mechanical properties And physics.	Precision measuring instruments Classification of minerals mechanical properties And physics.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the third	4	Identifying the types of files - Its parts - How to use it - An exercise on how to straighten the surface.	Types of files - their parts Instructions for use - How to exercise Leveling the surface.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fourth	4	Identifying processes The flag and the flag - use The needle of the mark - the hook and how to plan the pattern - cutting tools - an exercise on Planning and cutting.	Marking and grading operations Using the Shinkar marking needle and how to plan The drill – cutting tools, planning exercise And the pieces.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth	4	Identifying an exercise on Filing - Training on various filing processes with Planning, marking, and cutting And preparing the faces and work Structures.	Exercise on the file Operations training Different types of cold water with Planning, marking, and cutting And preparing the faces and work Structures.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Sixth	4	Identifying the types Teeth - How to make an external and internal tooth - Exercise.	Types of teeth - How to External tooth work And internally - an exercise.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Seventh	4	Identifying a comprehensive exercise – training the student to perform A comprehensive exercise on all Filing operations.	Comprehensive exercise - training The student is working A comprehensive exercise on all Filing operations.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Eighth	4	Identifying the types Lathes according to the type of work and lathe dimensions - how to Operation and Maintenance And perform them on lathes.	Types of lathes according to Type of work and measurements Lathes - How to Operation and Maintenance And its procedures on Lathes.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Ninth	4	Identifying the types of pens Turning – Turning tool angles – Forces acting on tools – How to determine The pen.	Types of lathe tools lathe tool angles Forces affecting Pens - How to sharpen a pen.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
tenth	4	Learn how to mount a lathe tool on an axis	How to install a pen Turning on an axis	Lecture The workshop	Written tests Term exams

		Introduction to the lathe Fixing the workpiece on the lathe axis and how to verify this – Feeding training Longitudinal and vertical.	Lathe and workpiece clamping On the lathe axis And how to ensure that: Nutrition training Longitudinal and vertical.	laboratory Summer training	Final exams Daily assessment
atheistic ten	4	Learning about lathe operation Longitudinal and terrace construction With different diameters - an exercise.	Longitudinal turning and work Terraces with diameters Different - exercise.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
twelfth	4	Learning about lathe operation Interior - How to perform the cutting operation on a lathe Using cutting pens And how the cavity works. an exercise .	Internal turning How to perform the operation Cutting on a lathe Using cutting pens And how the cavity works. an exercise .	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
thirteenth	4	Identifying tooth production Types of teeth - Tooth tables on a lathe an exercise .	Tooth production - Types of teeth - Tables Teeth on a lathe an exercise .	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
fourteenth	4	Identifying a comprehensive exercise For turning operations.	A comprehensive exercise for operatic ns Turning.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth ten	4	Identifying Continuity Work through the previous exercise. Discussion of the reports.	Continued work on the exercise Previous - Discussion Reports.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

95. Course Evaluation

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

96. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	
Main references (sources)	
Recommended supporting books and references (scientific journals, reports...)	
Electronic references, websites	Checking out websites in this field

97.	Course Name: Soil Preparation Equipment
98.	Course code: AMT12330CM
99.	Term/Year: Second Term/First Year
100.	Date this description was prepared: 2026/8/6
101.	Available attendance formats: Attending a lecture
102.	Total study hours/total units: 5 hours/5 units
103.	Name of the course coordinator (if there is more than one, please mention it).
Name: M. M. Abbas Fadel Abdul	Email:Abbas.fadhil1983.ism@atu.edu.iq
104. Course Objectives	
Course objectives Study	- Introducing students to the machines and equipment used in preparing soil for agriculture and how to operate them. - The student should be able to use all types of plows and soil preparation machines, handle the machine and tractor, select them according to the type of soil, detect faults and how to maintain them.
105.	Teaching and learning strategies
strategy	13- Identifying the types of systems in an agricultural tractor. Identifying 14- the engine components in an agricultural tractor. Identifying the 15- power transmission methods in an agricultural tractor. Identifying the 16- types of maintenance performed.

006. Course Structure

Week	Hours	Required learning outcomes	Unit name or the topic	Learning method	Evaluation Method
the first	6	Introduction – Importance of Tillage – Characteristics of Good Tillage – Positive and Negative Effects of Tillage Mechanical assembly For the soil	Introduction – The Importance of Tillag Tillage characteristics Good effects Positive and negative For tillage – installation Soil mechanic	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the second	6	Identifying equipment Primary tillage – Types of plows – The plow Lower plow – Types – Areas of use – Reason for preferring the lower plow	Primary tillage equipment Types of plows – The sub-plow – Types – Fields Usage – Reason plow preference lower	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the third	6	Identifying and calculating power Affecting the plow lower	Calculate the applied force On the lower plow	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fourth	6	Identifying the plow Disc plow – types – main parts – reasons for preferring the disc plow How to turn over the soil.	Disc plow – Types – Parts Main – Reason plow preference Disc – How to turn Soil.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth	6	Identifying the plow Vertical disc – Main parts – types Comparison between the disc plow and the harrow Vertical disc	disc plow Vertical – Parts Home – Types – Comparison between plows Disc and plow Vertical disc	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Sixth	6	Identifying the plow Chisel – Parts Main – Types – Advantages and Disadvantages – Why the Chisel Plow is Preferred Types of obstacles – Types of weapons.	chisel plow – Main parts – Types – Advantages And the defects – cause plow preference Chisel – Types Symptoms – Types Weapons.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Seventh	6	Getting to know Rotary – How to transfer motion from Types – Types – PTO Weapons – Interest	Rotary – How to transfer motion fromPTO Types – Types of Weapons – Interest	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Eighth	6	Identifying subsurface soil - Its importance - Areas of use - Components Home - Calculating Strength The one that influences it.	Subsoil - its importance - Areas of use - Main components - Calculating the applied force On it.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

Ninth	6	Identifying equipment Secondary tillage – its types – Areas of use – General objective	Secondary tillage equipment – Types – Areas of Use – Purpose Year	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
tenth	6	Identifying the combs – Types – Fields Its uses – factors Influential on penetration Combs.	Combs – Types – Areas of Use – Factors affecting Penetrating combs.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
atheistic ten	6	Comb identification Disc-shaped – its type – Areas of use – The toothed comb – advantages And the defects – delivery And calibration.	Disc comb – its type – Areas of use – Toothed comb – Advantages And the defects – delivery And calibration.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
twelfth	6	Device identification Settlement – Types – Areas of Use – Leveling equipment – types – Connection and calibration – Maintenance.	Leveling equipment – Types – Areas of Use – Devices Leveling – Types – Connection and Calibration – Maintenance.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
thirteenth	6	Identifying the rollers – Its type – fields Use – Trenches – Its parts – connection and calibration	Rollers – their types – areas of use – Trenches – their components – connection and calibration	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
fourteenth	6	Equipment identification Vehicle – its type – its importance – Its use – The benefit	Combined equipment – Its type – its importance – its use – its benefit	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth ten	6	Understanding maintenance Repair of agricultural machinery The importance of maintenance and storage	Machine maintenance and repair Agriculture – Importance Maintenance – Storage	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

164. Course Evaluation

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

164. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	General principles of soil preparation equipment
Main references (sources)	General principles of soil preparation equipment
Recommended supporting books and references (scientific journals, reports...)	A collection of books on soil preparation equipment
Electronic references, websites	Checking out websites in this field

109.	Course Name: Mathematics
110.	Course code: AMT12430CM
111.	Term/Year: Second Term/First Year
112.	Date this description was prepared: 2024/8/6
113.	Available attendance formats: Attending a lecture
114.	Total study hours/total units: 2 hours/2 units
115.	Name of the course coordinator (if there is more than one, please mention it).
Name: M.D. Intisar Mohammed Khudair	Email:Intisar.mohammed@atu.edu.iq
116. Course Objectives	
Course objectives Study	- This course introduces students to different types of mathematical equations, the concepts of differential and integral calculus, and - their applications. Students will be able to solve various types of mathematical problems, apply functions and determinants, and find distance, velocity, and acceleration using general physics and engineering principles.
117.	Teaching and learning strategies
strategy	1. Identifying the types of equations and their degrees. 2. Identifying functions and their derivatives. 3. Identifying the types of trigonometric functions. 4. Identifying applications of differential and integral calculus.

8- Course structure

Week	Hours	Required learning outcomes	Unit name or the topic	Learning method	Evaluation Method
the first	2	To learn a brief overview of mathematics and its benefits.	A brief overview of Mathematics and its benefits	Lecture	Written tests Term exams

		Types of equations and their degrees - Algebraic terms - Coefficients - The ace.	Types of equations Its degrees - limits Algebra - Coefficients The ace.		Final exams Daily assessment
the second	2	Understanding Differentiation Its concept - derivatives polynomial functions And its derivatives.	Differentiation - its concept - derivatives and functions polynomial And its derivatives.	Lecture	Written tests Term exams Final exams Daily assessment
the third	2	Discovering applications on As stated above.	Applications of what was mentioned above .	Lecture	Written tests Term exams Final exams Daily assessment
Fourth	2	Identifying Functions Trigonometry - A Brief Overview - Its Derivatives - Implicit Functions - Its derivatives.	Trigonometric functions - a brief overview - their derivatives - Implicit functions Its derivatives.	Lecture	Written tests Term exams Final exams Daily assessment
Fifth	2	Discovering applications About functions.	Applications related to functions.	Lecture	Written tests Term exams Final exams Daily assessment
Sixth	2	Discovering applications Differentiation – Maximum and Minimum Values – Graphing Ordinary Functions and Determining Points The coup.	Applications of Differentiation - Values Maximum and minimum Graphing regular functions And identifying the points of inversion.	Lecture	Written tests Term exams Final exams Daily assessment
Seventh	2	Identifying and finding distance Speed and acceleration Physical and engineering applications General.	Finding distance and speed Acceleration - Applications General physics and engineering .	Lecture	Written tests Term exams Final exams Daily assessment
Eighth	2	Understanding integration Its concept – the laws and their relation to differentiation – definite integral Unspecified.	Integration – its concept – laws and their relationship Differential-Integral The specific and the unspecified.	Lecture	Written tests Term exams Final exams Daily assessment
Ninth	2	Discovering applications Regarding integration.	Applications related to integration.	Lecture	Written tests Term exams Final exams Daily assessment
tenth	2	Identifying and finding The area under the curves Under the curve - the area Approximate using quasi The Pervert and Simpsons.	Finding the space underneath The curved and under Curve - Area Approximate using quasi The Pervert and Simpsons.	Lecture	Written tests Term exams Final exams Daily assessment
atheistic ten	2	Understanding how to find the arc length of a curve - Applications Different.	Finding the length of an arc The curve - applications Different.	Lecture	Written tests Term exams Final exams Daily assessment
twelfth	2	Identifying the determinants Its properties - various applications About the topic.	Determinants - their properties Various applications about the topic .	Lecture	Written tests Term exams Final exams

					Daily assessment
thirteenth	2	Identifying the sequel Applications about determinants .	Completion of applications about Determinants.	Lecture	Written tests Term exams Final exams Daily assessment
fourteenth	2	Identifying the center of gravity of areas - moment of inertia Self-contained spaces.	Center of gravity of areas - moment of inertia For spaces.	Lecture	Written tests Term exams Final exams Daily assessment
Fifth ten	2	Discovering applications Around the center of gravity of the spaces And the palace's determination.	Applications about the center Weight of spaces and torque The palaces.	Lecture	Written tests Term exams Final exams Daily assessment

6- Course Evaluation
The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

4- Learning and teaching resources	
Required textbooks (methodology, if applicable)	General Principles of Mathematics
Main references (sources)	General Principles of Mathematics
Recommended supporting books and references (scientific journals, reports...)	A collection of books in the field of mathematics
Electronic references, websites	Checking out websites in this field

118.	Course Name: Plane and Topographic Surveying
119.	Course code: AMT12530CM
120.	Term/Year: Second Term/First Year
121.	Date this description was prepared: 2026/8/6
122.	Available attendance formats: Attending a lecture
123.	Total study hours/total units: 5 hours/5 units
124.	Name of the course coordinator (if there is more than one, please mention it).
Name: M.D. Auras Mohsen Kazem	Email:
125. Course Objectives	
Course objective Study	- The student will be able to understand the science of surveying, its divisions, uses, and leveling works of all kinds, and the accompanying works such as contour maps, longitudinal and cross-sections of all kinds, drawing them, calculating their area, and using some angle measuring devices. - The student will be able to measure horizontal and inclined distances, as well as use land surveying equipment to find the levels of points on the Earth's surface and the means of utilizing them, such as drawing longitudinal and cross-sections and calculating their area, as well as identifying types of maps, drawing scales, drawing contour maps, using the theodolite device and the benefits of using it in agricultural projects.
126.	Teaching and learning strategies
strategy	1. Identifying surveying instruments. 2. Understanding methods for calculating elevations. 3. Identifying different types of maps.

3- Course structure

Week	Hours	Required learning outcomes	Unit name or the topic	Learning method	Evaluation Method
the first	5	Understanding the definition Area – its divisions – its uses – area Topography – Leveling – Some important definitions in Settlement.	Definition of area – Its divisions - its uses - topographic surveying Settlement – some Important definitions in Settlement.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the second	5	Identifying measurement Horizontal and inclined spacing - erection and dropping of poles from and along the route By tape	Measuring horizontal distances And the inclined - construction and proj ction The columns from and on Route By tape	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the third	5	Identifying the types of devices Leveling – Tools Used in leveling – the hairline method for measuring distances – selection and verification god.	Types of leveling equipment – tools used in Settlement – Method Hairs in measurement Distances - Selection And machine inspection.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fourth	5	Understanding methods for calculating elevations – the elevation method The device.	Methods of calculating elevations - Method of elevation The device.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth	5	Identifying GPS receivers - their use in Location and routing lines and distance measurement Horizontal and vertical.	GPS receivers - their use in determining Locations and Directions lines and measurement horizontal distances And verticality.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Sixth	5	Identifying the types Maps - Scale - Longitudinal scale Grid drawing.	Types of maps - Map scale - Map scale Longitudinal drawing Network.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Seventh	5	Map recognition Contouring – its properties – Its uses – period Contouring and the factors that She makes her choice.	Contour map – Its properties – its uses Contour period and the factors that determine Her choice.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Eighth	5	Drawing recognition Contour map By way of calculation.	Contour map drawing By way of calculation.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Ninth	5	Learn about methods of enlargement Resizing maps And its embodiment.	Methods of enlarging and reducing Maps and their representation.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
tenth	5	Identifying sections	longitudinal sections	Lecture	Written tests

		Its longitudinal uses And he drew it.	Its uses and design.	The workshop laboratory Summer training	Term exams Final exams Daily assessment
atheistic ten	5	Identifying the method Approximate area calculation longitudinal section of the pieces And the rubble.	The approximate method in Calculating the cross-sectional area Longitudinal cutting and backfilling.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
twelfth	5	Identifying sections Its accidental uses And he drew it.	cross-sections Its uses and design.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
thirteenth	5	Identifying the method Arithmetic and graphical representation in Calculating the area of sections The incidental.	The mathematical method And the official account Section area The incidental.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
fourteenth	5	Account identification cross-sectional area For irrigation canals and drains.	Calculating the area of sections Transverse irrigation canals And the drains.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth ten	5	Device identification Theodolite – its types – Its uses in measuring Angles and directions.	Theodolite device – Types – Uses In measuring angles And trends.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

5- Course evaluation

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

6- Learning and teaching resources

Required textbooks (methodology, if applicable)	General principles of plane surveying
Main references (sources)	General principles of plane surveying
Recommended supporting books and references (scientific journals, a c reports...)	llection of books in the field of plane surveying,
Electronic references, websites	Checking out websites in this field

127.	Course Name: Industrial Drawing
128.	Course code: AMT12630CM
129.	Term/Year: Second Term/First Year
130.	Date this description was prepared: 2026/8/6
131.	Available attendance formats: Lecture attendance – Computer lab
132.	Total study hours/total units: 4 hours/4 units
133.	Name of the course coordinator (if there is more than one, please mention it).
Name: M.D. Mina Musaher Alwan	Email: mena.alwan@atu.edu.iq
134.	Course objectives
Course objectives Study	- The student will be trained to draw and interpret machine diagrams. - They will also be trained to connect mechanical parts, represent - mechanical components through drawing, and mount mechanical - models on a drawing board.
135.	Teaching and learning strategies
strategy	1. Understanding the connection of mechanical parts. 2. Understanding the types of screws. 3- Identifying the types of gears. 4- Identifying the types of friction clutches.

8- Course structure					
Week	**Hours**	**Required learning outcomes**	**Unit name or the topic**	**Learning method**	**Evaluation Method**
the first	4	Identifying connection methods Mechanical parts – IUDs – Types – Varieties Nuts.	Methods of connecting parts Mechanical – Screws – Types – Types Nuts.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the second	4	Identifying the power spiral – The moving screw – drawing a picture.	Power screw – moving screw – drawing a diagram.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the third	4	Identifying nails Rivets – their specifications – their uses – drawing a diagram.	Rivets Its specifications – its use – He drew a picture.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fourth	4	Identifying pegs – their types – drawing a diagram.	The Khawabeer – its types – He drew a picture.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth	4	Identifying contraindications Leakage – Types – Diagram A painting.	Sealants – Types of paintings.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Sixth	4	Belt identification – Belt pulley – Drawing a diagram .	Belts – Belt Pulley – He drew a picture.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Seventh	4	Gear identification Straight gear (worm gear) – drawing A painting.	spur gears (Straight gears) – Worm gears – Drawing a diagram.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Eighth	4	Gear identification Conical shape – drawing a picture.	Bevel gears – He drew a picture.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Ninth	4	Identifying the assembly diagram for a gearbox Conical – modified.	Drawing a collage gearbox Conical – modified.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
tenth	4	Identifying the gripper – its types – drawing a diagram.	The gripper – its types – He drew a picture.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
atheistic ten	4	Identifying the bearings Its types – drawing a painting.	Rollers – Types – He drew a picture.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
twelfth	4	Getting to know the wheel	Flying wheel –	Lecture	Written tests

		Pilot – Flip-up Axle – He drew a picture.	Flip-up axis – drawing A painting.	The workshop laboratory Summer training	Term exams Final exams Daily assessment
thirteenth	**4**	Identifying the collection Bone connections – drawing A painting.	Assembling rigid joints – He drew a picture.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
fourteenth	**4**	Understanding link assembly Flexible – drawing a picture.	Assembling a flexible connector – He drew a picture.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth ten	**4**	Learning to draw a painting Chair assembly parts Axis.	drawing a collection board Segmented axis chair.	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

6- Course Evaluation

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

4- Learning and teaching resources

Required textbooks (methodology, if applicable)	General principles of industrial drawing
Main references (sources)	General principles of industrial drawing
Recommended supporting books and references (scientific journals, reports...)	A collection of books in the field of industrial drawing
Electronic references, websites	Checking out websites in this field

Phase Two

Course description template

136.	Course Name: Agricultural Tractor Maintenance
137.	Course code: AMT21130CM
138.	Term/Year: First Term/Second Year
139.	Date this description was prepared: 2026/8/6
140.	Available attendance formats: Attending a lecture
141.	Total study hours/total units: 4 hours/4 units
142.	Name of the course coordinator (if there is more than one, please mention it).
Name: M. M. Abbas Fadel Abdul	Email:Abbas.fadhil1983.ism@atu.edu.iq
143. Course Objectives	
Course objectives Study	- Definition of maintenance and repair, how to understand and read maintenance and repair books, how to perform maintenance according to specified times and schedules
144.	Teaching and learning strategies
strategy	- The student will be able to perform maintenance as a complete program. - The student must adhere to the schedule and safety rules during work hours, while providing the necessary resources for its implementation.

038. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
the first	4	Understanding the importance of maintenance and upkeep – its definition – familiarizing oneself with maintenance and repair workshops	The importance of maintenance and upkeep Definition - Identifying workshops Maintenance and repair.	Lecture The workshop laboratory	Written tests Exams Quarterly

				Summer traini	g, final exams Daily assessment
the second	4	Understanding the maintenance application after (50) working hours - How Battery charging and maintenance.	Maintenance application after (50) working hours - How to charge Battery maintenance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the third	4	Understanding the procedure for connecting the generator belt – how to tighten it correctly – its calibration and how to adjust it The substitution.	Connecting the generator belt: How to tighten it correctly - calibrating it And how to replace it.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth	4	Identifying and understanding the characteristics Hydraulic oil - treating leaks and identifying their causes. System maintenance.	Understanding the properties of oil Hydraulics - Leakage Treatment Understanding its causes. Maintenance The system.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth	4	Identifying maintenance after (100) hours of work - This maintenance is carried out by the students, performing the oil change process.	Maintenance after (100) hours of work - This maintenance is carried out by students, including a replacement process. Oil.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Sixth	4	Understanding the maintenance follow-up procedure (100) working hours - Steps for changing the engine oil and filter - Fuel system maintenance.	Maintenance follow-up (100) working hours - Steps for changing engine oil and filter - Maintenance Fuel system.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Seventh	4	Understanding the procedure for blowing air from the fuel system Tire maintenance - The effect of air pressure on tires.	Performing the process of expelling air from Fuel system - Tire maintenance - Effect of air pressure On the tires.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Eighth	4	Identifying maintenance after (250) hours of work - the importance of this Maintenance and its terminology - procedures Valve calibration.	Maintenance after (250) working hours - the importance of this maintenance and its components - calibration procedure Valves.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Ninth	4	Understanding and monitoring maintenance After (250) hours of operation, the feed pump was serviced and calibrated. Extruder replacement	Follow-up maintenance after (250) working hours - Pump maintenance Feeding, calibrating, and replacing Extruders	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
tenth	4	Identifying and monitoring the maintenance of other parts - performing calibration The separator and brake adjustment.	Follow up on the maintenance of other parts - perform calibration of the separator and calibration The break.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

atheistic ten	4	Identifying maintenance after (500) hours of operation, maintenance and replacement of fuel filters in Diesel engines.	Maintenance after (500) hours of work - Maintenance and replacement of fuel filters in diesel engines.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second ten	4	Understanding maintenance follow-up after (500) working hours - Methods and importance of wheel carrier maintenance Front and axle assembly.	Maintenance follow-up after (500) working hours - Methods and importance of maintaining front wheel bearings And the axes are assembled.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the third ten	4	Identifying maintenance follow-up after (500) working hours - How Cooling system maintenance Addressing external leaks Interior	Maintenance follow-up after (500) working hours - How to maintain and repair the cooling system External and internal leaks	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth ten	4	Understanding maintenance after one year of actual operation – its importance – Conducting practical applications of this	Maintenance after one year of operation The actual - its importance - and the implementation of practical applications for it.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth ten	4	Understanding how to maintain the performance of transmission equipment; steps for storing the tractor in a suitable manner. Correct.	How to maintain the performance of transmission equipment - Proper tractor storage steps .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

146. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.

144. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	General principles for maintaining agricultural tractors
Main references (sources)	General principles for maintaining agricultural tractors
Recommended supporting books and references (scientific journals, reports...)	A collection of agricultural products and their types.
Electronic references, websites	Checking out websites in this field

Course description template

148.	Course Name: Transmission Systems
149.	Course code: AMT21230CM
150.	Term/Year: First Term/Second Year
151.	Date this description was prepared: 2026/8/6
152.	Available attendance formats: Attending a lecture
153.	Total study hours/total units: 5 hours/5 units
154.	Name of the course coordinator (if there is more than one, please mention it).
Name: Dr. Intisar Mohammed Khudair	Email:
155. Course Objectives	
Course objectives Study	- Introducing the student to the movement locking devices and training them on their correct use, maintenance, and upkeep.
156.	Teaching and learning strategies
strategy	1- The student will be able to identify transmission systems in terms of types and components And methods of using and maintaining them. 2- He must be able to use and estimate power transmission methods according to the type of work. 3- The student should be able to identify the parts of the separator, gearbox, and transmission assembly in a scientific and practical manner. 4- The student should be able to disassemble and assemble the parts of the transmission equipment.

087. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
the first	5	Understanding linear motion Speed - Acceleration - Representing Speed and Acceleration and Explaining Their Importance	Linear motion - speed Acceleration – representing speed and acceleration and explaining the importance of each	Lecture The workshop laboratory	Written tests Exams Quarterly

		Each one		Summer traini	g, final exams Daily assessment
the second	5	Understanding rotational motion Representing velocity and acceleration: the relationship between linear motion Rotational motion	Rotational motion – representing velocity – acceleration – the relationship between Linear motion and motion rotation	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the third	5	Understanding torque and work The importance of each and its relationship to power transmission systems - exa	Torque and work – the importance of each and their relationship to power transmission systems. ples. Examples.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth	5	Understanding energy, its types, units, power, and forms of power - Solve the exercises.	Energy - its types - its units - power - forms of power - solution Exercises.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth	5	Understanding direct transmission – Flexible couplings – The importance of each – Definition of a flexible coupling Its features - its working theory Its uses.	Direct transmission – Flexible couplings – The importance of each – Definition of a flexible coupling Its features - its working theory Its uses...	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Sixth	5	Identifying the power socket shaft – its sources of movement, its various designs – drawing different models – the drive pulley in Agricultural machinery - cases Use it.	Power outlet column - its sources of movement - its various designs Drawing different models - the drive pulley in agricultural machinery Its uses.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Seventh	5	Identifying chains Belts – the importance of each – the effect of slippage on belts – chain drives – diagrams of different types – disadvantages of using them – types Belts - their advantages and disadvantages.	Chains and belts – the importance of each – the effect of slippage on belts – transmission of motion using chains – drawing different types of chains – disadvantages of using them Types of belts - their features And its drawbacks.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Eighth	5	Understanding the joint – its definition and types – drawing the joint and explaining its parts – exercises on slippage and friction	The divider - its definition - its types - drawing the divider and explaining its parts Exercises on slipping and friction	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Ninth	5	Identifying the separator Hydraulic and torque converter Hydraulic – Importance – the components .	Hydraulic separator and hydraulic torque converter – importance - the components .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
tenth	5	Understanding gears – their importance in power transmission – gear materials and shapes – their advantages and disadvantages Types of forces acting upon them We are the reason for the reduction.	Gears - their importance in power transmission - gear metal and shape - their advantages and disadvantages - their types The forces acting and the cause Discount.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

atheistic ten	5	Understanding differential gears and the differential mechanism; the importance of each. These include: its operating principle, differential gear designs, and the operating principle and components of the differ Examples	Differential gears and device Differential - the importance of each - the principle of its operation - differential gear designs - the principle of operation of the ntial. differential device - its parts - examples.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second ten	5	Identifying solar gears – final drive device – box Automatic gears Features - Parts for each rose .	Solar gears - transmission device Final - Automatic Gearbox - Features - Parts for all that has been mentioned.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the third ten	5	Understanding the standard gearbox – its parts – its advantages and disadvantages – its function – its purpose From it – its maintenance	The standard gearbox – its parts – its advantages and disadvantages – Its function – its purpose – Its maintenance	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth ten	5	Identifying the gearbox Automatic - Advantages and Disadvantages - Function - Purpose From it – its maintenance.	Automatic gearbox Advantages and disadvantages – Function – Purpose – Its maintenance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth ten	5	Identifying the types of drive systems: tires, runners, and other components. Methods to reduce slippage.	Drive systems - Tires - Extravagance - Types - Methods Reduce slippage.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

154. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.

159. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	General principles of power transmission systems
Main references (sources)	General principles of power transmission systems
Recommended supporting books and references (scientific journals, reports...)	A collection of books in the field of transmission systems
Electronic references, websites	Checking out websites in this field

Course description template

160.	Course Name: Agricultural Machinery Electrical Systems
161.	Course code: AMT21330CM
162.	Term/Year: First Term/Second Year
163.	Date this description was prepared: 2026/8/6
164.	Available attendance formats: Attending a lecture
165.	Total study hours/total units: 5 hours/5 units
166.	Name of the course coordinator (if there is more than one, please mention it).
Name: M.D. Intisar Mohammed Khudair	Email:Intisar.moh@gmail.com

167. Course Objectives

Course objectives Study	- Defining and training the student on electrical devices and components in Agricultural machinery and how to use it

168. Teaching and Learning Strategies

strategy	1- The student will be able to use electrical testing and inspection equipment. 5- The student should be familiar with all parts of the electrical system and how to perform maintenance and upkeep.

064. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
the first	5	Understanding the terminology Electrical symbols - testing and inspection devices for the system Electrical.	Terms and symbols Electrical - Testing and inspection equipment for electrical systems .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second	5	Identifying induction Self-induction - mutual induction Magnetism - Field Magnetic conductors Insulators - electrical circuits.	Induction – Self-induction – Mutual induction – Magnetism – Field Magnetic conductors Insulators - electrical circuits.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

the third	5	Battery identification Its structure - how it works.	Battery - Installation - How to Her work.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth	5	Understanding battery maintenance Electrolyte fluid - types Charging the battery - Checking the battery - Storing the battery.	Battery maintenance – Electrolyte – Battery charging methods – Battery testing Store the battery.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth	5	Identifying the components of a generator. Its operation - its maintenance - its repair.	Generator components - its operation and maintenance Repairing it.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Sixth	5	Understanding the charging circuit and how current is converted in The circle.	Charging circuit - how is the conversion done? The current in the circuit.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Seventh	5	Understanding voltage regulators – types – operation – components Inspection and replacement.	Current regulator - types - operation - parts - testing and replacement.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Eighth	5	Understanding the operation of the starter motor (starter) – its parts – Maintenance - Repair.	Starter motor operation - Maintenance parts Repair.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Ninth	5	Identifying the starting circuit - Motor starter switch - Function of each part, how to connect and link the starting circuit Movement.	Starter circuit – Starter motor switch – Function of each part - How to connect and link the starting circuit Movement.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
tenth	5	Identifying the work file - installation - condenser - Structure - Function.	Work file - Installation work - Intensive - Installation The job.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
atheistic ten	5	Identifying the distributor: parts, function, and calibration. Spark plug parts Work - modification.	Spark distributor - parts Function - Calibration - Spark Plug - Working Parts Calibration.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second ten	5	Understanding the candlestick: parts, function, and types Candle holders.	The candle holder - its parts and function - types of candle holders.	Lecture The workshop laboratory	Written tests Exams Quarterly

				Summer traini	g, final exams Daily assessment
the third ten	5	Identifying the power supply and comparing it to an electrical power supply.	The work distributor – a comparison with The electrical distributor.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth ten	5	Understanding lighting in tractors and vehicles - wiring distribution system - traffic lights - maintenance and repair.	Lighting in tractors Vehicles - wiring system - traffic lights Maintenance and repair.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth ten	5	Understanding system maintenance Electrical - Inspection and testing of the electrical system of machines Agricultural.	Electrical system maintenance System inspection and testing Electrical equipment for agricultural machinery.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

146. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.

141. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	General principles of agricultural machinery electrical systems
Main references (sources)	General principles of agricultural machinery electrical systems
Recommended supporting books and references (scientific journals, reports...)	A set of shoulder pads in an electric dryer for agricultural waste.
Electronic references, websites	Checking out websites in this field

172.	Course Name: Irrigation Equipment
173.	Course code: AMT21430CM
174.	Term/Year: First Term/Second Year
175.	Date this description was prepared: 2026/8/6
176.	Available attendance formats: Attending a lecture
177.	Total study hours/total units: 4 hours/4 units
178.	Name of the course coordinator (if there is more than one, please mention it).
Name: Dr. Mustafa Hassan Wariush	Email:Wr.mustafa@atu.edu.iq
179. Course Objectives	
Course objectives Study	- Understanding the importance of irrigation systems and their sources in Iraq, and identifying the differences between irrigation systems and pumps.
180.	Teaching and learning strategies
strategy	The student will be able to determine the relationship between soil, water, and plants, the type of irrigation, and measure water levels.

080. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
the first	4	Learn about Deginition of irrigation, irrigation sources in Iraq	Deginition of irrigation irrigation sources in Iraq	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the second	4	Water – Plant Learn about Soil – relationship	Soil – Water – Plant relationship	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the third	4	Learn about Irrigation	Irrigation	Lecture	Written tests

		Requirement Consumptive Use	Requirement Consumptive Use	The workshop laboratory Summer training	Term exams Final exams Daily assessment
Fourth	4	Learn about Irrigation water Conveyance	Irrigation water Conveyence	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fifth	4	their important and Learn about Pumps, types	Pumps, their important and types	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Sixth	4	Learn about Pumping Principle and pump efficiency measurement	Pumping principle and pump efficiency measurement	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Seventh	4	Learn about Power Requirements and Pumping efficiency	Power Requirement and Pumping efficiency	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Eighth	4	Learn about Factors Limit to select pump	Factors limit to select pump	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Ninth	4	Learn about Centerfulginal Pumps	Centerfulginal Pumps	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
tenth	4	Learn about Turbine Pumps	Turbine Pumps	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
atheistic ten	4	Learn about Mixed Flow Pumps	Mixed Flow Pumps	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the second ten	4	Learn about Piston Pumps	Piston Pumps	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
the third ten	4	Learn about Conditions of Pumps Setup	Conditions of Pumps Setup	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment
Fourth ten	4	Learn about Methods sub-surface irrigation of surface irrigation,	Methods of surface surface irrigation irrigation, sub -	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

Fifth ten	4	Learn about Sprinkler and Drip irrigation methods	Sprinkler and Drip irrigation methods	Lecture The workshop laboratory Summer training	Written tests Term exams Final exams Daily assessment

142. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.

143. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	General principles of irrigation equipment
Main references (sources)	General principles of irrigation equipment
Recommended supporting books and references (scientific journals, reports...)	A collection of books on irrigation
Electronic references, websites	Checking out websites in this field

Course description template

184.	Course Name: Agricultural Machinery Hydraulics
185.	Course code: AMT21530CM
186.	Term/Year: First Term/Second Year
187.	Date this description was prepared: 2026/8/6
188.	Available attendance formats: Attending a lecture
189.	Total study hours/total units: 5 hours/5 units
190.	Name of the course coordinator (if there is more than one, please mention it).
Name: M.D. Intisar Mohammed Khudair	Email:Intisar.moh@gmail.com

191. Course Objectives

Course objectives Study	- The student is introduced to the concept of hydraulics and how to use H ydr a u lic devices Devices and Systems them, and how to perform maintenance on them.

192.	Teaching and learning strategies
strategy	1. To introduce and train students on hydraulic devices and systems in agricultural machinery. 2. To introduce and train students on open and closed systems. 3. To familiarize the student with the uses of hydraulics in tractors, heavy machinery, and excavators. 4. To familiarize the student with the nature of hydraulic fluids and their characteristics. Replace it with a leak treatment.

040. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
the first	5	Introduction to Hydraulics - Basic Principles Hydraulics - symbols - units used.	Introduction to Hydraulics: Basic Principles of Hydraulics - Symbols - Units Used.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second	5	Identifying the main parts	Main parts of the system	Lecture The workshop	Written tests Exams

		Hydraulic systems - types Hydraulic systems.	Hydraulics - Types of Systems Hydraulic.	laboratory Summer training	Quarterly Final exams Daily assessment
the third	5	Identifying the systems Open hydraulics - connection types for this type of system.	Open hydraulic systems Types of connections for this type of Systems.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth	5	Identifying the systems Closed hydraulic systems – types of connections for this type of system.	Closed hydraulic systems Types of binding for this type of Systems.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth	5	Understanding the comparison between types Open and closed systems.	Comparison between types of systems Open and closed.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Sixth	5	App Discovery Hydraulics in machines Agricultural...	Hydraulic applications in Agricultural machinery.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Seventh	5	Understanding the use of the hydraulic system in the drive device Hydraulic.	The use of a hydraulic system in a hydraulic drive device.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Eighth	5	Understanding the use of the hydraulic system in the parking device Hydraulic.	Using the hydraulic system in the hydraulic parking device.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Ninth	5	Understanding the use of the hydraulic system in the lifting and lowering device of hydraulic equipment In the tractors.	Using the hydraulic system in the lifting and lowering device of hydraulic equipment in tractors.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
tenth	5	Identifying the uses Hydraulic system in heavy machinery (excavators - cranes)	Uses of the hydraulic system in heavy machinery (excavators) Cranes).	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
atheistic ten	5	Identifying pumps Hydraulics - Definition of a pump - Classification of pumps - Types of pumps.	Hydraulic pumps Pump definition - classification Pumps - their types.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

the second ten	5	Valve identification Hydraulics - its types - function Each type - valve location in The system.	Hydraulic valves - their types - the function of each type - the valve's location in the system.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the third ten	5	Identifying the tank Hydraulics - its components - the conditions that must be met Oil cooler - its types.	Hydraulic tank - its components - Required conditions Oil cooler - its types.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth ten	5	Identifying liquids Hydraulics - Requirements - Types of oil cooling.	Hydraulic fluids - Required conditions - Types of cooling Oil.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth ten	5	Understanding daily maintenance The periodicity of the system Hydraulics - How it works At their scheduled times.	Daily and periodic maintenance of the hydraulic system - how to carry it out at the specified times.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

194. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.

195. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	General principles of agricultural machinery hydraulics
Main references (sources)	General principles of agricultural machinery hydraulics
Recommended supporting books and references (scientific journals, reports...)	A set of shoulders in a hydraulic dryer for agricultural waste.
Electronic references, websites	Checking out websites in this field

196.	Course Name: Crop Farming and Service Equipment
197.	Course code: AMT21630CM
198.	Term/Year: First Term/Second Year
199.	Date this description was prepared: 2026/8/6
200.	Available attendance formats: Attending a lecture
201.	Total study hours/total units: 4 hours/4 units
202.	Name of the course coordinator (if there is more than one, please mention it).
Name: Dr. Mina Musaher Alwan	Email:mena.alwan@atu.edu.iq
203. Course Objectives	
Course objectives Study	- Assisting students in the use of agricultural equipment, seeds, pesticides, and fertilization, and comparing them to manual farming and their impact on increasing the quantity and quality of agricultural production.
204.	Teaching and learning strategies
strategy	1- Distinguishing between mechanized farming and manual farming. 2. Using agricultural equipment and crop management in a scientific and practical manner. 3. Carrying out adjustment, rigging, calibration, and maintenance operations.

208. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
the first	4	Understanding the importance of mechanized agriculture – a comparison between Automatic and manual.	The importance of mechanized agriculture - a agriccuolmtuprearison between mechanized and manual agriculture.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second	4	Understanding the scattering machine – types – structure – operation – Calibration - Usage.	Spreading Machine – Types – Construction – Operation – Calibration – Use	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

the third	4	Identifying seeding equipment – installation – seed feeding mechanism – Types of gaps – mechanisms of operation – effect of speed on Quantity of seeds.	Seeding equipment - Installation - Mechanism Seed nutrition – types – germination – mechanism of action – effect Speed depends on the quantity of seeds	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth	4	Understanding how to connect the seed drill to the tractor – laboratory and field calibration – types of seed drills Where the linking method is used – examples Calculation.	Connecting the seed drill to the tractor – laboratory and field calibration – Types of seed drills in terms of the method of connection - mathematical examples.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth	4	Identifying agricultural equipment In lines - seeding models and square planting - types of square planting (at the bottom of the irrigation canal - on level ground) On the shoulders of the seed storage unit, the feeding mechanism, the seed tubes, regulation and calibration. Coverage unit.	Agricultural equipment in lines Sowing and planting models Square planting – Types of square planting (at the bottom of the irrigation canal – on level ground – on the shoulders of the canal) – Seed storage unit – Feeding mechanism - seed tubes - Organization and Standardization Unit Coverage	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Sixth	4	Identifying a corn planter Yellow - Composition - Calibration - Use.	Yellow corn planter Assembly - Calibration - Usage.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Seventh	4	Getting to know cotton cultivation Assembly - Calibration - Usage.	Cotton planter - structure - Calibration - Usage.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Eighth	4	Understanding sugar beet cultivation – its types – composition Calibration - Usage.	Sugar beet cultivation - types - structure - calibration Usage.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Ninth	4	Getting a general idea about mechanical planting. Rice – Seedling Preparation – Seed Selection – Seed Treatment Weeding.	General idea of mechanical seedling planting - rice planting - seedling preparation - seed selection - seed treatment - weeding.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
tenth	4	Understanding field preparation (plowing, leveling, flooding) - Machine installation - Transplanting mechanism Calibration - Usage.	Field preparation (plowing - leveling - Immersion – Machine Installation – Planting Mechanism – Calibration – Use .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
atheistic ten	4	To gain a general understanding of pest control operations and sprayers in general – their types – the pumps used. Its types and structure.	General overview of pest control and spraying operations – types – pumps used – types – installation .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

the second ten	4	Identifying motorized sprayers – their purpose – regulations Operation – Organization of the unit – Calculating the amount of pesticide	Motorized sprayers – their purpose – operating settings – spray volume control – calculating pesticide quantity	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the third ten	4	Understanding Dusting Machines – Types – Construction – Uses Operation – Advantages – Disadvantages – Calculations for regulating the quantity	Fogging machines – types – installation – use – operation Advantages - Disadvantages - Calculations for organizing the measure.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth ten	4	Fertilization Machines - Organic Fertilizer Machine - Composition Calibration - Operation.	Fertilizer machines – Organic fertilizer machine – Installation – Calibration Operation.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth ten	4	Understanding Flame Throwers - Installation - Operation - Use	Flamethrowers - Installation - Operation - Usage.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

266. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.

264. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	General principles of crop cultivation and service equipment
Main references (sources)	Encyclopedia of Agricultural Machinery and Equipment
Recommended supporting books and references (scientific journals, reports...)	Journal of Agricultural Engineering Sciences / University of Baghdad
Electronic references, websites	Checking out websites in this field

208. Course Name: Graduation Research Project

209. Course code: AMT217CM

210. Term/Year: First Term/Second Year

211. Date this description was prepared: 2026/8/6

212. Available attendance formats: Attending a lecture

213. Total study hours/total units: 2 hours/2 units

214. Name of the course coordinator (if there is more than one, please mention it).

Name: Dr. Mustafa Hassan Wariush Email:Wr.mustafa@atu.edu.iq

215. Course Objectives

Course objectives	The student will be able to implement and manage agricultural projects.

216. Teaching and Learning Strategies

strategy	1- The student will be able to determine the cost of the project and identify its requirements. 2- The student will be able to use, calibrate and adjust the machines and equipment during their use in managing the project. 3- The student will be able to carry out maintenance, upkeep and storage operations for the equipment and machines used in the project. 4- The student will be able to calculate the profits of the project and face and overcome obstacles.

207. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
1	2	Learn how to use Library, find and choose Sources.	How to use the library and find And choosing sources.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
2	2	Understanding how to use the internet to gather information Each experience is unique.	How to use the internet to gather information for each experiment.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

3	2	Learn how to design and plan experiments agricultural	Learn how to design and plan agricultural experiments	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
4	2	Identifying project setup and determining the allocated space And preparing the necessary machinery for preparation Seedbed.	Project preparation and definition Allocated space and preparation Machines required to prepare a shrine The seed.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
5	2	Learn how to start the plowing process and follow the method The occasion.	Starting the plowing process and following The appropriate method.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
6	2	Understanding the leveling process using a leveling machine Identifying the heights and lowlands	Performing the leveling process using a leveling machine and identifying elevations and lowlands	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
7	2	Understanding the setup of the agricultural machine In brief, with the work of calibration Laboratory.	Preparing the planting machine in lines with laboratory calibration work.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
10-8	2	Identifying and discussing the seminars prepared by each student Under the supervision of the instructors.	Discussion of prepared seminars From each student under supervision The instructors.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
11	2	Identifying data collection specific to each experiment from the library and the internet	Data for each experiment was collected from the library and the internet.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
12	2	Understanding the steps involved in preparing and writing a research paper	Understanding the preparation steps Writing the research	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
13	2	Learning about agriculture The crop includes ridge work, opening irrigation ditches, and determining the quantity of seeds and fertilizer per dunam.	Planting the crop involves creating raised beds, opening irrigation ditches, and determining the quantity of seeds and fertilizer per dunam. also .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
14	2	Understanding crop irrigation Which was planted, pumps were operated and maintained, and the crop was monitored in terms of ripening.	Irrigate the planted crop and operate the pumps Maintenance and crop monitoring	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams

		Preparing the harvesting equipment.	In terms of maturity and equipment preparation The harvest.		Daily assessment
15	2	Understanding and calculating crop germination percentage and studying The efficiency of the machine farming process.	Calculating the crop germination rate and studying the efficiency of the cultivation process. By machine.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
16	2	Learn about crop irrigation and the operation of baling machines.	Irrigating the crop and operating machinery Baling work.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
17	2	Identifying crop germination monitoring and determining the percentage Moisture in the crop's fruit.	Monitoring crop germination and determining Moisture content in fruits The harvest.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
18	2	Learn about the use of hoeing, weeding, and pest control machines with Determine the quantity, type, and mixing method of the pesticide – using the machine The occasion.	Use of hoeing and weeding machines Control measures include specifying the quantity and type of pesticide and the method of m Use the appropriate machine.	Lecture The workshop xing it. laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
20-19	2	Identifying and monitoring growth The harvest.	Monitoring crop growth.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
21	2	Identifying the procedure The harvest.	Carry out the harvesting process.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
30-22	2	Understanding data collection The result.	Collect the data obtained.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

214. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.

219. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	General principles of a graduation research project
Main references (sources)	General principles of a graduation research project
Recommended supporting books and references (scientific journals, reports...)	A collection of books in the field of graduation research projects
Electronic references, websites	Checking out websites in this field

Course description template

Course name:
Computers and Artificial Intelligence 2
Course code:
ATU22
Chapter/Year:
First semester / Second year
Date this description was prepared:
2026-8-6
Available attendance formats:
My attendance is according to the weekly schedule.
Number of study hours (total) / Number of units (total):
2 hours / 2 units
Name of the course coordinator (if there is more than one, please state):
M.M. Walaa Hussein Email: walaa.allawi@atu.edu.iq

Goals The course	- Introducing the student to electronic computers, their importance, how they work, and their components Preparing him to use a computer and training him to perform or participate in application programs in his field of specialization.
Course objectives	The student works on the computer, enters data, and obtains results.

Study

	Hour T	Learning outcomes Required	Unit name or the topic	Learning method, a	sessment method
	3	Understanding the concept Networks And its types, the internet How to operate it, the main screen, connecting to the World Wide Web Benefit from search engines Global like Yahoo Ways, & Google	The concept of networks And its types: Networks The internet and how to Turn it on, the screen Home, Connecting to the World Wide Web Benefit from search engines Global like Yahoo Ways, & Google	center calculator	Tests Editorial Exams Quarterly Exams Final Daily assessment

		Access to information.	Access to information.		
identification on Exploration F mistakes computer Ter Continued h Problems to The rumor in computer Ter And the air Tf and sites The lie Dia.	3	Learn about the program Excel spreadsheet Specifications Features, How-to Operation, screen Main and its components, Drop-down lists, Cell and data types Dakhla.	spreadsheet program Specifications, Excel Features, How to operate, Screen Main and its components, Drop-down lists, Cell and data types Dakhla.	center calculator	Tests Editorial Exams Quarterly Exams Final Daily assessment
Astra Tijiat education and learning		Identifying and memorizing Work page Worksheet Retrieval, closure The program, recovery File, Data Entry And performing the operations Simple arithmetic, Data control and formatting Inside the cell.	Save work page Worksheet Retrieval, closure The program, recovery File, Data Entry And performing the operations Simple arithmetic, Data control and formatting Inside the cell.		
Astra Tijia		Identifying methods Collecting and sorting data, using certain functions Sports, such as Max Min, Sum, Count, Sqrt	Data collection methods Sort them, use Some mathematical functions For example, Max, Min Sum, Count, Sqrt		

2 - identification on Exploration F mistakes computer Ter Continued h Problems to The rumor in computer Ter		Identifying the procedure Revision processes within Cells, copying and moving data, copying operations Arithmetic, concept relative cells Relative cells Absolute Using formatting tools In controlling processes Cells, working with charts Conversion, Charts Digital data Text to diagrams	Performing revision operations Within cells, copying and moving data, copying calculations. The concept of relative cells Relative cells Absolute Using formatting tools In controlling processes Cells, working with charts Conversion, Charts Digital data Text to diagrams .		
3 - identification on intelligence The Mourner in The hornets F and sites The lie Dia		Learn about the addition Delete the rows And the columns on the page Work, printing digital data and charts.	Add and delete Rows and columns in Work page, print Digital data And the plans.		
	3	Getting to know the program SPSS statistical software Operation, steps Data analysis, Screen components Home, Login Data, save Retrieval, sorting Data exchange Determine the procedure	Statistical program Operation, data analysis steps, SPSS Screen components Home, Login Data, save Retrieval, sorting Data exchange Determine the procedure Statistician.	center calculator	Tests Editorial Exams Quarterly Exams Final Daily assessment

		Statistician.			
structure The course		Identifying inserts Variable Case study, descriptive analysis and statistics. Statistical Summary Summary of data Special Reports By columns and rows.	Inserting the variable State, Variable Analysis, Case Descriptive statistics. Statistical Summary Summary of data Special Reports By columns and rows.		
The week A		Identifying the procedure Comparing averages Compare Mean Comparison between variables Correlate decline Regression	Conduct a comparison Averages Compare Mean Comparison between variables Correlate decline Regression		
1		Discovering applications Quality Control Panel Quality Control Working with diagrams Graphics, dealing with Commands such as Summarize, : Custom table, Anova models, Non-parametric methods	Control Panel Applications Quality Handling, Control With charts Dealing with commands such as: Summarize Custom table, Anova models, Non-parametric methods		
2					
laboratory					

semester exams	General principles of computer applications (2)
Final exams	General principles of computer applications (2)
Daily assessment	A collection of computer applications (2)
2	Checking out websites in this field

220.	Course Name: Agricultural Tractor Repair
221.	Course code: AMT22130CM
222.	Term/Year: Second Term/Second Year
223.	Date this description was prepared: 2026/8/6
224.	Available attendance formats: Attending a lecture
225.	Total study hours/total units: 4 hours/4 units
226.	Name of the course coordinator (if there is more than one, please mention it).
Name: M. M. Abbas Fadel Abdul	Email:Abbas.fadhil1983.ism@atu.edu.iq
227. Course Objectives	
Course objectives Study	- Training on how to use the tools and devices in the repair process and training the student on diagnosing faults and how to repair them.
228.	Teaching and learning strategies
strategy	- The student should be able to use the tools and equipment used for repairs. - The student will be able to diagnose faults and how to repair them.

224. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
the first	4	Understanding the definition of repair and the difference between repair and maintenance.	Definition of repair - the difference between Repair and maintenance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second	4	Identifying Repair Workshops: Types of Repair Workshops - Requirements Must be available in a workshop	Repair workshops: Types of repair workshops - Requirements for a repair workshop	Lecture The workshop laboratory	Written tests Exams Quarterly

		Repair - Safety Precautions Safety for workshops.	Safety and security precautions For workshops.	Summer traini	g, final exams Daily assessment
the third	4	Engine malfunctions - diagnosis - identifying how to detect them - correct methods of use Devices in the detection process Malfunctions.	Engine malfunctions - diagnosis - How to detect them - The correct methods for using devices in the fault detection process .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth	4	Understanding engine opening procedures and precautions to take When opening the engine - the numbering method for engine parts Reasons for the inscription.	Engine opening – Precautions to take when opening the engine – Numbering method for engine parts – Reasons for numbering .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth	4	Valve identification Its rules and principles of the governorate On it.	Valves, their bases and foundations Preserve it.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Sixth	4	Identifying repair Valves and Accessories - A Guide Valve – Valve shaft repair – Valve clearance adjustment – Inspection and troubleshooting Cylinder block Detection of consumption - Treatment of valve clearance.	Valve and fitting repair - Valve guide - Shaft repair Valves - Valve clearance adjustment, inspection and repair Cylinder block Detection of consumption - Treatment of valve clearance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Seventh	4	Understanding inspection and repair Presses based on technical principles Required: Piston shapes, methods for limiting expansion, piston ring inspection, and installation procedures. .	Piston inspection and repair Based on the required technical principles – piston shapes – reduction method From expansion - checking the piston rings - how to install them.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Eighth	4	Understanding cylinder repair – cylinder types – testing them Cylinder turning – Smoothing methods – Cylinder and connecting rod replacement – Detection Bending - Twisting.	Cylinder repair – Cylinder shapes – Cylinder inspection – Cylinder turning – Cylinder smoothing methods Cylinder and arm replacement Connection - Detection of curvature - Twisting.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Ninth	4	Identifying the crankshaft, its repair, and methods for inspecting its parts - Checking static balance - Examining the crankshaft - Turning it - Checking Lathe accuracy.	Crankshaft repair and methods of inspecting its parts - detection of static balance - inspection of the crankshaft - turning it - detection of turning accuracy.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
tenth	4	Understanding camshaft repair, emphasizing its importance in relation to the crankshaft and connecting rod. Delivery.	Camshaft repair, emphasizing the importance of its connection to the crankshaft and connecting rod. .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

atheistic ten	4	To learn about a scientific visit to observe the actual work For the basics of repairing parts The engine.	A scientific visit to observe the actual work of the repair principles. For engine parts.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second ten	4	Identifying and repairing the system Diesel fuel - fault diagnosis - repair procedures.	Diesel fuel system repair Fault diagnosis procedures Repair.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the third ten	4	Identifying and repairing the system Gasoline fuel - troubleshooting - repair steps And the calibration of the carburetor.	Repairing the gasoline fuel system Fault diagnosis - steps for repairing and calibrating the carburetor.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth ten	4	Identifying and repairing the system Cooling and lubrication.	Cooling system repair And oiling.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth ten	4	Understanding brake repair Mechanical and hydraulic systems – Brake operation mechanism of two types – Troubleshooting for each These include repair steps.	Repairing mechanical and hydraulic brakes – The mechanics of operation of two types of brakes – Diagnosing faults in each – Steps Repair.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

236. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.

231. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	General principles for repairing agricultural tractors
Main references (sources)	General principles for repairing agricultural tractors
Recommended supporting books and references (scientific journals, reports...)	A group of shoulders in a dryer for agricultural processing
Electronic references, websites	Checking out websites in this field

Course description template

232.	Course Name: Harvesting and Harvesting Machines
233.	Course code: AMT22230CM
234.	Term/Year: Second Term/Second Year
235.	Date this description was prepared: 2026/8/6
236.	Available attendance formats: Attending a lecture
237.	Total study hours/total units: 5 hours/5 units
238.	Name of the course coordinator (if there is more than one, please mention it).
Name: Dr. Mustafa Hassan Wariush	Email:Wr.mustafa@atu.edu.iq
239. Course Objectives	
Course objectives Study	- The training and development of the following: the use of the following machines ...
240.	Teaching and learning strategies
strategy	- Defining for the student how to operate and work with the equipment of the genuflecting and schematics. And the fortresses

230. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
the first	5	Understanding mechanized harvesting and its benefits - Comparison between mechanized and manual harvesting - Equipment Harvesting and reaping.	Mechanical harvesting and its benefits - a comparison between mechanical and manual classification harvesting - classification of harvesting and reaping	Lecture The workshop laboratory equipment. Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second	5	Harvester units and groups	Harvester units and groups	Lecture	Written tests

		Its operation - its function - its maintenance - How to transfer motion.	Its operation - its function - its maintenance - How to transfer motion.	The workshop laboratory Summer training	Exams Quarterly Final exams Daily assessment
the third	5	Identifying the components of a set of parts - assembling them - calibrating them - Grain losses - maintenance.	The set of parts – its components, its assembly – its calibration – losses For grains - their maintenance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth	5	Identifying the transport group Its parts - How it works - Calibration and maintenance.	Transport system – its components, how it works, its calibration and maintenance .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth	5	Identifying the group of students Calibrated parts - Studying and addressing losses - How they work .	The study group - calibrated parts - studying losses and their treatment - how it works.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Sixth	5	Identifying the separation and cleaning set – parts – workflow The crop - how to calibrate it And reducing losses.	Separation and cleaning unit - parts - crop flow How to calibrate and reduce losses.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Seventh	5	Understanding how motion is transmitted From the engine to the harvester's assemblies and parts - the theory of operation of the chains - the belts - the gears.	How to transfer power from the engine to the harvester's assemblies and parts Theory of operation of chains Belts - Gears.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Eighth	5	Understanding seasonal maintenance For the wheat and barley harvester Harvester modification for harvesting Other crops.	Seasonal maintenance of wheat and barley harvesters - Harvesting the harvester for harvesting crops Other.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Ninth	5	Understanding the sugar beet harvesting machine – types of harvesters, their operation, their parts, adjustment and calibration The machine.	Sugar beet harvesting machine - types of harvesters - their operation - their parts - adjusting and calibrating the machine.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
tenth	5	Identifying castles Tuber crops – potato harvesters – their types – theory of operation Each of them - its calibration.	Tuber crop harvesters (potato harvesters) - their types - how they work - their calibration .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
atheistic ten	5	Understanding feed chopping machines – their structure – operating theory – types – maintenance And storing them.	Feed chopping machines - installation Work theory - its types Its maintenance and storage.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

the second ten	5	Identifying and understanding feed pressing and conveying machines – their types – theory Its operation - its maintenance.	Feed pressing and conveying equipment Its types - its theory of operation - Its maintenance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the third ten	5	Identifying a feed pellet mill The package - how it works - Calibrating it - storing it.	Feed baler - baler How it works - its calibration - Storing it.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth ten	5	Understanding cotton reaping machines: their operating system, types, and structure. .	Cotton harvester - how it works - Its types - its structure.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth ten	5	How to make cotton gin With its two systems - its maintenance.	How to make cotton gin With its two systems - its maintenance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

242. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.

243. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	General principles of harvesting and reaping machines
Main references (sources)	General principles of harvesting and reaping machines
Recommended supporting books and references (scientific journals, reports...)	A collection of books on harvesting and reaping machinery
Electronic references, websites	Checking out websites in this field

Course description template

244.	Course Name: Mechanization of Animal Production
245.	Course Code: AMT22330CM
246.	Term/Year: Second Term/Second Year
247.	Date this description was prepared: 2026/8/6
248.	Available attendance formats: Attending a lecture
249.	Total study hours/total units: 4 hours/4 units
250.	Name of the course coordinator (if there is more than one, please mention it).
Name: M.M. Mahmoud Othman Abbas	Email:
251. Course Objectives	
Course objectives Study	- Training the student and his knowledge of the animal inflation mechanism and how to operate, maintain and preserve it.
252.	Teaching and learning strategies
strategy	- They ensure the student is capable of operating the devices and equipment in the poultry fields And the refrigeration, the irrigation, the feed mill, the dryer, the electrical generators, the water pumps, and maintenance and repair procedures.

280. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
the first	4	To gain a general understanding of the mechanization of livestock production fields – hatcheries, slaughterhouses, and feed mills Cattle, sheep, and poultry farms and a water treatment plant And electric generators.	General overview of mechanization in livestock production fields – hatcheries, slaughterhouses, feed mills, farms Cows, sheep, poultry, water purifier, and generators Electrical.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second	4	Introduction to the use of blacksmithing and gas welding workshops - Issue	Using a blacksmith and welding workshop The Ghazi - Numbers and Tools	Lecture The workshop	Written tests Exams

		The tools and equipment available In it	And the devices contained therein.	laboratory Summer training	Quarterly Final exams Daily assessment
the third	4	Understanding the use of electric arc welding – the importance of welding Electricity and its uses.	Using electric arc welding The importance of electric welding And its uses.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth	4	Understanding electricity in livestock production fields – Single-phase electricity Three-phase electrical cycle terminology Electrical symbols.	Electricity in livestock production fields – Single-phase and three-phase electricity – The cycle Electrical Terminology Electrical symbols.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth	4	Understanding the mechanization of poultry hatcheries – the importance of hatcheries and the equipment they contain – equipment Egg grading - Egg preservation and inspection equipment - Incubators.	Mechanization of poultry hatcheries – Importance of hatcheries – Equipment found within them – Egg grading equipment – Egg storage and inspection equipment Incubators.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Sixth	4	Learn about the mechanization of broiler chicken farms using electric and gas incubators. Air conditioning units - Feeders Al-Manahil - Laying hen cages, types of cages.	Mechanization of broiler chicken farms: electric and gas incubators Air conditioning units - Feeders Al-Manahil - Laying hen cages, types of cages.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Seventh	4	Understanding the mechanization of concentrated feed processing – Types of feed mills – Mill components Animal feed - Types of crushers and mixers - Maintenance And repair.	Mechanization of concentrated feed processing – Types of feed mills – Parts of a feed mill – Types of grinders Mixers - Maintenance And repair.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Eighth	4	Introduction to cattle and sheep farm mechanization – tools and equipment – feed trough and water trough cleaning equipment – cooling and spraying equipment – shearing equipment Wool and dipping.	Mechanization of cattle and sheep farms Tools and equipment – Feeder and waterer cleaning equipment – Cooling and spraying equipment – Devices Shearing and dipping.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Ninth	4	Identifying the Mahlab Automatic parts - function Each part - types of milking equipment - Milk storage devices.	Automatic milking machine parts The function of each part - types of milking machines - milk storage devices.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
tenth	4	Understanding the mechanization of green fodder processing – green fodder harvesters, hay balers – types, maintenance, and repair .	Feed processing mechanization Greenery - Green fodder harvesters - Hay baler - Types, maintenance, repair.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

atheistic ten	4	Understanding the mechanization of poultry and livestock slaughterhouses, slaughtering methods, and cutting equipment. Meat preservation	Automation of poultry and livestock slaughterhouses - Slaughtering methods and equipment Cutting and preserving meat.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second ten	4	Understanding water pumps – their types – operation, maintenance. And repair.	Water pumps - types - operation, maintenance, and repair .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the third ten	4	Identifying generators Its types - its parts - its operation - Its maintenance.	Generators - their types - their parts - Its operation and maintenance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth ten	4	Understanding the project's generator needs – calculating the power required to operate the project – lighting – equipment Electrical.	Calculating the project's need for generators - calculating the energy required to operate the project - lighting - electrical equipment.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth ten	4	Understanding the mechanization of animal protein production from waste Massacres (feathers, blood) internal organs)	Protein manufacturing mechanization Animal waste from slaughterhouses (Feathers, blood, viscera) Interior)	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

254. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.

255. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	General principles of mechanization of animal production
Main references (sources)	General principles of mechanization of animal production
Recommended supporting books and references (scientific journals, reports...)	A collection of books on the mechanization of animal production
Electronic references, websites	Checking out websites in this field

Course description template

256.	Course Title: Economics of Agricultural Mechanization
257.	Course Code: AMT22430CM
258.	Term/Year: Second Term/Second Year
259.	Date this description was prepared: 2026/8/6
260.	Available attendance formats: Attending a lecture
261.	Total study hours/total units: 4 hours/4 units
262.	Name of the course coordinator (if there is more than one, please mention it).
Name: Dr. Mustafa Hassan Wariush	Email:Wr.mustafa@atu.edu.iq
263. Course Objectives	
Course objectives Study	- The student defines the concept of expansion and expansion, uses examples of agricultural machinery, and applies economic evaluation criteria to it.
264.	Teaching and learning strategies
strategy	The student should be able to: 1. Determining the costs of agricultural production in terms of knowing the flexibility of demand and supply of agricultural products. 2. Determining the optimal use of machinery and the level of cost adequacy. 3. Selecting the appropriate agricultural machinery and determining its number.

268. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
the first	3	Introduction to Production Economics - The Concept of Economics - Agricultural Economics Departments and branches of economics	Introduction to Production Economics The concept of economics Agricultural - Departments and Branches Agricultural economics.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

		Agricultural.			
the second	3	Understanding the concept of production – Types of production factors – Forms of agricultural production functions – Stages Production.	The concept of production - types of production factors - forms of agricultural production functions - stages of production.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the third	3	Identifying the demand for agricultural products – the curve Demand – Elasticity of Demand, Supply – Supply Curve – Elasticity of Supply – Equilibrium Price .	Demand for agricultural products – Demand curve – Elasticity of demand; Supply – Supply curve – Elasticity of supply – Equilibrium price .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth	3	Understanding the types of production costs – cost functions in the short and long run Ways to reduce costs.	Types of production costs - Short-run cost functions And the long one - ways to reduce Costs.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth	3	Understanding agricultural labor productivity - methods of measuring labor productivity - factors affecting it.	Agricultural labor productivity – Methods of measuring labor productivity – Factors The one that influences it.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Sixth	3	Understanding the principles The main economic sector.	Key economic principles.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Seventh	3	Understanding the capacity economics of machines and calculating field capacity Theory, reality, and efficiency Field.	Capacity economics of machines and calculation of theoretical field capacity Reality and field efficiency.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Eighth	3	Understanding the calculation of agricultural labor costs – their types, depreciation, its causes, and methods of calculation .	Calculating the costs of agricultural labor - Its types - Extinction and its causes And the methods of calculating it.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Ninth	3	Identifying optimal use For machinery – intensive horizontal use of machinery indicators Level of sufficiency of intensification.	Optimal machine utilization – Intensive horizontal machine utilization – Level indicators Sufficient intensification.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
tenth	3	Understanding agricultural marketing – its importance – marketing functions The main one in Iraq.	Agricultural marketing: its importance and basic marketing functions In Iraq.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

atheistic ten	3	Identifying the selection of agricultural machinery – analyzing the time required to balance the size of the machine And the available time.	Selection of agricultural machinery - analysis Time - Balancing the size of the machine with the available time.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second ten	3	Identifying the power requirements of agricultural machinery; forms of power; power requirements .	Agricultural machinery needs Ability - Forms of ability - Needs for ability.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the third ten	3	Understanding linear programming, its applications, and problem-solving methods. Problems with linear programming.	Linear programming – its applications – problem-solving methods Linear programming.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth ten	3	Map recognition Technology for determining the number of machines - organizing the technological map.	Technological map for determining the number of machines - map organization Technology.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth ten	3	Understanding the application of economic evaluation criteria in mechanization Agricultural.	Applying evaluation criteria Economical in mechanization Agricultural.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

266. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.

264. Learning and Teaching Resources

Required textbooks (methodology, if applicable)	General principles of agricultural mechanization economics
Main references (sources)	General principles of agricultural mechanization economics
Recommended supporting books and references (scientific journals, reports...)	A group of shoulder-related items in a drying room for agricultural machinery.
Electronic references, websites	Checking out websites in this field

Course description template

1. Course Name: Reclamation Machinery and Equipment

2. Course code: AMT22530CM

3. Term/Year: Second Term/Second Year

4. Date this description was prepared: 2026/8/6

5. Available attendance formats: Attending a lecture

6. Total study hours / Total unit hours: 5 hours / 5 unit hours

7. Name of the course coordinator (if there is more than one, mention it).

Name: M.D. Mina Musaher Alwan Email:mena.alwan@atu.edu.iq

8. Course Objectives

Course objectives Study	Enable the student to use reclamation land equipment and its Maintenance.

9. Teaching and learning strategies

strategy	Enable the student to use the machine with correct methods and How to repairs it.

00. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
the first	5	tractors – Gradability. tractor uses – types of Learn about Tractors –	Tractors – tractor uses Types of tractors Gradability.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second	5	Learn about Bull difference between Dozers – uses – the crawler and wheel Mounted bull dozers.	the difference between Bull Dozers – uses – crawler and wheel Mounted bull dozers.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

the third	5	Types of equipment used – hydrowlic system.	Types of equipment used – hydrowlic system.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth	5	Learn about The out Repairs and put of bull dozer – maintenance.	Dozer – repairs and the out put of bull maintenance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth	5	Learn about Front – Types and sizes – end types – loaders – uses – of equipment.	Front-end loaders Uses – Types and Sizes – Types of equipment.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Sixth	5	Learn about The out put of front – end – loaders – problems – maintenance.	The output of front – end – loaders – problems – maintenance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Seventh	5	Learn about Scrapers – types and sizes – operating Ascraper - cycle time for Scraper.	Scrapers – types and sizes – operating Ascraper - cycle time for Scraper.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Eighth	5	equipment – hydraulic Learn about Types of system – maintenance – problems.	Types of equipment – hydraulic system – maintenance – problems.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Ninth	5	of equipments – uses . types of grader – types Learn about Grader –	Grader – types of Grader – types of equipment – uses.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
tenth	5	Learn about The out put of grader – hydraulic system – maintenance.	The output of grader – hydraulic system – maintenance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
atheistic ten	5	Learn about Excavating equipment – drag lines equipment – types of – the Output.	Excavating equipment drag lines – the – types of equipment – Output.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second ten	5	Learn about Hydraulic drag lines – the basic parts – hydraulic system –	Hydraulic drag lines – the basic parts – hydraulic system – Maintenance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams

		Maintenance.			Daily assessment
the third ten	5	Learn about A cable – the basic parts – depth controlled drag line – of cut – Maintenance.	drag line – the basic A cable – controlled parts – depth of cut – Maintenance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth ten	5	Learn about Trenching machines – the basic parts – types of trenching machine.	Trenching machines – of trenching machine. the basic parts – types	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth ten	5	Learn about Hydraulic system of trenching machines – the out put – maintenance.	Hydraulic system of trenching machines – the out put – maintenance.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

11. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.

12. Learning and teaching resources

Required textbooks (methodology, if applicable)	General principles of land reclamation machinery and equipment
Main references (sources)	General principles of land reclamation machinery and equipment
Recommended supporting books and references (scientific journals, reports...)	A collection of shoulders in a drying room, a collection of facilities and reclamation equipment
Electronic references, websites	Checking out websites in this field

Course description template

1. Course Name: Fundamentals of Machine Use

2. Course code: AMT22630CM

3. Term/Year: Second Term/Second Year

4. Date this description was prepared: 2026/8/6

5. Available attendance formats: Attending a lecture

6. Total study hours / Total unit hours: 5 hours / 5 unit hours

7. Name of the course coordinator (if there is more than one, mention it).

Name: M.D. Intisar Mohammed Khudair Email:Intisar.mohammed@atu.edu.iq

8. Course Objectives

Course objectives Study	The student learns and understands the scientific and practical methods upon which the use of machines in work fields is based, and determines their numbers, sizes, capabilities, and the time required to accomplish the tasks assigned to him and his work.

9. Teaching and learning strategies

strategy	1- Understands all forms of power and the units used in them, and how power is generated in a machine. 2. Understands the forms of power exploitation, identifies external forces affecting the tractor, and recognizes the situations. Where the coup takes place. 3- He learns and understands how to calculate fuel and oil consumption during operation and how to perform inspection on the tractor.

00. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
the first	5	Understanding units of measurement for length, area, and weight And the size in the French systems And the English.	Units of measurement for length, area, weight, and volume in the two systems French and English.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

the second	5	Understanding the definition of ability The law that governs power, and how to calculate each form of it – calculates the power formed from The movement of a specific object.	Definition of power - The law that governs power - How to calculate each One form of this calculation determines the power generated by the movement of a specific object.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the third	5	Identifying the definition of each form of ability – distinguishing between Power forms – units used in both the French and English systems .	Defining each form of power – differentiating between forms of power – the units used in them Both French systems And the English.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth	5	Identifying the work completed in Engine - Engine power - Use of power output - Use of braking power.	Work done by the engine; engine power; power utilization Graphical - Using the ability Brake.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth	5	Understanding how to utilize engine power on the intake shaft and on the drive shaft The rear of the tractor.	How to utilize the engine's power on the traction shaft and the rear drive shaft of the tractor.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Sixth	5	Identifying the tug as a lever Simple – External forces acting on the tug – identification Forces and reactions.	The pulley as a simple lever - external forces acting on the pulley - determining forces and reactions.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Seventh	5	Identifying and neutralizing the vertical forces acting on the tug. The reaction force for each force – a statement of the algebraic sum of moments on each axis of the gravitational pulley .	Neutralize the normal forces acting on the drag force and the reaction force for each force – express the algebraic sum For the moments in each axis of The tug's axles.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Eighth	5	Identifying methods for determining the center of gravity – by weight – by suspension Finding the distance of the center of gravity from the rear axis and from the midpoint The drag system - longitudinal and lateral balance - slippage and factors affecting drag efficiency.	Methods for determining the center of gravity: by weight, by suspension, and finding the distance of the center of gravity from the rear axle. And about the middle of the tug Longitudinal and lateral equilibrium, slippage, and influencing factors On the efficiency of the withdrawal.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Ninth	5	Identifying the relationship between the center of gravity and the rollover in terms of its height - the relationship between the effective tug width and the rollover	The relationship of the center of gravity to the revolution in terms of its height - relationship Effective tug display By coup.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
tenth	5	Identifying the types of friction Normal pressure – Coefficient of friction – Determining the factors affecting friction – Calculation Coefficient of friction.	Types of friction – Normal pressure – Coefficient of friction Identifying the factors affecting friction – Calculating the coefficient Friction.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

atheistic ten	5	Understanding the definition of each of the following: distance, time, speed, acceleration, and the relationship between the	Definition of both distance and time Speed - Acceleration - Relationship . Among them	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the second ten	5	App Discovery Regarding the tractor - determining the distance and time of its parking starting from the moment the parking space is used.	Applications related to the tug-of-war Determine the distance and time of its stopping, starting from the moment of use. The situation.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
the third ten	5	Understanding the definition of acceleration Ground for falling objects Free fall - acceleration due to deceleration - relationship between acceleration and mass - acce Acceleration.	Definition of gravitational acceleration For objects falling freely, there is an acceleration-deceleration relationship. eration By mass - acceleration.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fourth ten	5	Understanding fuel use for power generation - fuel consumption - engine oil consumption .	Using fuel to produce power Fuel consumption The oil in the engine.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
Fifth ten	5	Identifying the most important international testing centers - procedures The tests on the tug Writing inspection reports .	Top global testing centers Procedures and tests on The trolley - report writing Regarding the examination.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

11. Course Evaluation

The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.

12. Learning and teaching resources

Required textbooks (methodology, if applicable)	General principles for the use of machines
Main references (sources)	General principles for the use of machines
Recommended supporting books and references (scientific journals, reports...)	A collection of books on the fundamentals of using machinery
Electronic references, websites	Checking out websites in this field

Course description template

1. Course Name: Graduation Research Project

2. Course code: AMT22730CM

3. Term/Year: Second Term/Second Year

4. Date this description was prepared: 2026/8/6

5. Available attendance formats: Attending a lecture

6. Total study hours / Total unit hours: 2 hours / 2 unit hours

7. Name of the course coordinator (if there is more than one, mention it).

Name: Dr. Mustafa Hassan Wariush Email:Wr.mustafa@atu.edu.iq

8. Course Objectives

The objectives of this cou academically.	se are for the student to be able to implement and manage agricultural projects

9. Teaching and learning strategies

strategy	1- The student will be able to determine the cost of the project and identify its requirements. 2- The student will be able to use, adjust, and control the machines and equipment during the period of their use in managing the project. 3- Be able to carry out maintenance, upkeep, and storage operations for the equipment and machinery used in the project. 4- He must be able to calculate the profits for the project and to face and overcome obstacles.

00. Course Structure

Week	Hours	Required learning outcomes	Unit or topic name	Learning method	Evaluation Method
1	2	Learn how to use Library, find and choose Sources.	How to use the library and find And choosing sources.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
2	2			Lecture	Written tests

		Learn how to use the internet to gather information Each experience is unique.	How to use the internet to gather information about each an experience.	The workshop laboratory Summer training	Exams Quarterly Final exams Daily assessment
3	2	Learn how to design and plan agricultural experiments.	Learn how to design and plan agricultural experiments	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
4	2	It identifies project setup and determines the allocated space. And preparing the necessary machinery for preparationSeedbed.	Project preparation and definition Allocated space and preparation Machines required to prepare a shrine The seed.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
5	2	He learns how to start the plowing process and follow the method. The occasion.	Starting the plowing process and following The appropriate method.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
6	2	Learn how to perform the leveling process using a leveling machine Identifying the heights and lowlands	Performing the leveling process using a leveling machine and identifying elevations and lowlands	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
7	2	Learn about setting up the agricultural machine In brief, with the work of calibration Laboratory.	Preparing the planting machine in lines with laboratory calibration work.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
8-10	2	He learns about the seminar discussions prepared by each student. Under the supervision of the instructors.	Discussion of prepared seminars From each student under supervision The instructors.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
11	2	It identifies the collection of data for each experiment from the library. and the internet	Data for each experiment was collected from the library and the internet.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
12	2	Learn about the steps involved in preparing and writing a research paper.	Understanding the preparation steps Writing the research	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
13	2	He learns about crop cultivation, including the construction of terraces, the opening of irrigation ditches, and determining the quantity of And fertilizer too.	Planting the crop involves creating raised beds, opening irrigation ditches, and seeddestepremrichiunngatmhe quantity of seeds and fertilizer per dunam. also .	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment

14	2	Learn about crop irrigation Which was planted, pumps were operated and maintained, and the crop was monitored in terms of ripening. Preparing the harvesting equipment.	Irrigate the planted crop and operate the pumps Maintaining and monitoring the crop in terms of ripening and preparing the equipment The harvest.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
15	2	It involves calculating the crop germination rate and studying The efficiency of the machine farming process.	Calculating the crop germination rate and studying the efficiency of the cultivation process. By machine.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
16	2	He learns about crop irrigation and the operation of baling machines.	Irrigating the crop and operating machinery Baling work.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
17	2	It involves monitoring crop germination and determining the percentage Moisture in the crop's fruit.	Monitoring crop germination and determining Moisture content in fruits The harvest.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
18	2	Learn about the use of hoeing, weeding, and pest control machinery with Determine the quantity, type, and mixing method of the pesticide – using the machine The occasion.	Use of hoeing and weeding machines Control measures include specifying the quantity and type of pesticide and the method of m Use the appropriate machine.	Lecture The workshop xing it. laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
19-20	2	It recognizes and monitors growth The harvest.	Monitoring crop growth.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
21	2	He recognizes the procedure The harvest.	Carry out the harvesting process.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
22	2	It recognizes data collection The result.	Collect the data obtained.	Lecture The workshop laboratory Summer training	Written tests Exams Quarterly Final exams Daily assessment
10. Course Evaluation					
The grade is distributed out of 100 according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, written, and report assessments, etc.					
11. Learning and teaching resources					

Required textbooks (methodology, if applicable)	General principles of a graduation research project
Main references (sources)	General principles of a graduation research project
Recommended supporting books and references (scientific journals, reports...)	A collection of books in the field of graduation research projects
Electronic references, websites	Checking out websites in this field

Course description template

Course name:	
English Language 2	
Course code	
ATU20	
Chapter/Year	
Chapter One / Stage Two	
Date this description was prepared	
0206-0-12	
Available forms of attendance	
Mandatory weekly attendance	
Total number of study hours / Total number of units	
0 hours / unit	
Name of the course coordinator (if there is more than one, please mention it).	
Name: M. M. Batoul Najm	Email:

Course objectives

Course objectives	The student will be able to: 1. To learn the basics and rules of the English language. 2. Identifying sentence structure and giving simple examples. 3. What are the verb tenses? 4. How to express quantities, and use some expressions See in the sentence

Teaching and learning strategies

strategy	- Lectures - Video presentation - Homework Conducting dialogues between students

Course structure

Week	Hours	Exit T Learning Required ŏ	Unit name A and topic	road Learning	Evaluation Method
1	0	Tenses Present, epast, future p6-8 sQuestion sQuestion words Who...? Why...?	sTense past, Present, 6-8p future snQuestio words sQuestion *hy . . . W Who...? ch . . . uHow m ?* p7*?*	the esent	semester exams Final exams Daily assessment

		... How much 7p ?			
2	0	sesnPresent te lepresent SIM Present sContinuou *ehave/hav got*	t tenses nPrese t Simple nPrese inuous resent Cont *e got vhave/ha*	thae esent	semester exams Final exams Daily assessment
3	0	essPast ten lepPast Sim Past sContinuou	t tenses sPa t Simple sPa uousnPast Conti	thae esent	semester exams Final exams Daily assessment
4	0	yQuantit Articles	Quantity ticles rA	thae esent	semester exams Final exams Daily assessment
5	0	snVerb patter Future intentions	rnseVerb patt uture F tionsninte	thae esent	semester exams Final exams Daily assessment
6	0	? eWhat's it like? evComparati and esuperlativ adjectives	ke?iWhat's it? and eComparativ erlative psu jectives da	thae esent	semester exams Final exams Daily assessment
7	2	perfect Present Pe tsand Pa Simple *censi*and*for* Tense revision	fect and rPresent Pe plemPast Si *since* and*for* ision vTense re	thae esent	semester exams Final exams Daily assessment
9+8	0	*to)have (got should must*	*t) tooh*ave (g *ldusho must*	thae esent	semester exams Final exams Daily assessment
12	0	Time and lconditiona clauses	e and Tim tionalcondi usesacl	thae esent	semester exams Final exams Daily assessment
11	0	ns 2rVerb patte Infinitives	erns 2 Verb patt itivesnInfi	thae esent	semester exams Final exams Daily assessment
10	0	Verb patterns 2	rns 2 eVerb patt	thae esent	semester exams Final exams Daily assessment

13		Second lconditiona	condeS tionalcondi	the esent	semester exams Final exams Daily assessment
14	0	perfect Present Pe usContinuo Present Perfect Simple versus sContinuou	perfect P Present ousuContin perfect P Present ersusv Simple uousnConti	the esent	semester exams Final exams Daily assessment
12	0	ctePast Perf deReport ststatemen	perfect ePast P ortedpRe entsmstate	the esent	semester exams Final exams Daily assessment

Course evaluation

The evaluation is done through:

1. Daily, monthly, and annual exams.

0. Interaction and group participation in discussing and solving exercises

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

Learning and teaching resources

Required textbooks (methodology, if applicable)	**h course re - Intermediate -- New head way English XFORD O UNIVERSIT John and PRESS YLiz Soars /**
Main references (sources)	
Recommended supporting books and references (scientific journals, reports)...	
Electronic references, websites	

Course name:	
Arabic language /0	
Course Code/Version Number/20	
ATU21	
Semester/Year	
First semester / Second year	
Date this description was prepared	
0206-8-6	
Available forms of attendance	
My attendance is mandatory weekly + blended learning	
Number of study hours (total) / Number of units (total)	
0 hours / 0 units	
Name of the course coordinator (if there is more than one, please mention it).	
Name: Dr. Noha Abdel Rasoul	**Email:**
Course objectives	
Goals **Study**	**Th general objective: It aims to provide the student with the rules of grammar and morphology and to introduce them to prominent figures in Arabic literature.** **Specific objective: To provide the student with the ability to correctly pronounce Arabic words and to recognize the features of the Arabic language.**
Teaching and learning strategies	
strategy	**The lecture utilized a whiteboard, projector screen, various resources, and training materials.** **Discussions among the students also took place.**

Course structure

Week	Hours	Learning outcomes Required	Unit or topic name	Learning method	Evaluation Method
1	0n	Understanding the meanings of the verse and identifying the reason Its revelation, along with memorizing whatever portion of it is ea y to recall.	Surah Al-Isra (verses 29-34)	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.
2	0n	Searching for the reason behind the revelation of the hadith	From the noble Prophetic Hadith: (God loves that when one of you does a job, he does it perfectly).	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.
3	0n	The student's ability to understand the nature of prose arts	Arabic Literature: The Beginnings of Literary Prose in the Pre-Islamic Era	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.
4	0n	Memorize the five verses The first of them and knowledge Meanings of the poem	Al-Mutanabbi's poem	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.

5	0n	Distinguishing between exchange Grammar	Morphology: Morphological Balance	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.
6	0n	Distinguishing between groups Breaking and Pluralizing The other	Plurals in Arabic	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.
7	0n	Enabling the student to identify the actor and clarify its type, and to determine the time of the event The verb	Attributing the verb to pronouns	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.
8	0n	Make the student swear The verbs are divided into two groups. Two basic principles: correct Those whose origins are free from the weak and defective letters Which contains a vowel	Verb conjugation in terms of soundness, weakness, detachment, and augmentation	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.
9	0n	The student was made to recognize the word that begins with a sun letter or a moon letter.	Language skills	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.
12	0n	Enabling the student to Using dictionaries To get to the root Linguistic of the word	Arabic dictionaries	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.
11	0n	A list was compiled of all the unusual words mentioned in the Holy Quran.	Meanings of unusual words in the Holy Quran	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.
10	0n	It enabled the student to distinguish between ض and ظ and to differentiate between many words, including كرايم and (كوريم).	fromMistakes Linguistic The rumor	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.
13	0n	Making the student capable of distinguishing between when The number differs from its counted noun in the singular and in the dual.	number	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.
14	0n	The ability to distinguish when to use tanween and when to use it We write the letter N Nun And tanween	Noon and Tanween	inside The hall My presence	Daily Assessment Note The answer. Answering questions during the lecture.
12	0n	Recognizing letters	Meanings of prepositions	inside	Daily Assessment Note

		Prepositions from, on, to, in, etc., and the meaning of each preposition and its positions. **Its uses**		The hall My presence	The answer. **Answering questions during the lecture.**

Course evaluation

Midterm exam grade 22%

End-of-course exam grade: 22%

Learning and teaching resources

Required textbooks (methodology, if applicable): General Arabic Language for Universities and Technical Institutes, prepared by Dr. Safaa Kazem / Dr. Lama Mohammed — Ministry of Higher Education curriculum

Main References (Sources): Applied Grammar / Dr. Khalid Abdul Aziz; Meanings of Grammar / Dr. Fadhil Al-Samarrai — Alfiyya Ibn Malik

Recommended supporting books and references (scientific journals, reports...): Dawah Journal, Journal of the College of Education for Human Sciences, University of Babylon.

Iraqi Scientific Academy

Electronic references, websites Al-Faseeh Forum Archive

Course Description

Crimes of the Ba'ath regime in Iraq

Course code:

ATU24

Chapter/Year:

First semester / Second year

Date this description was prepared:

0206-8-6

Available forms of attendance:Official working hours

Total study hours/total units: 0 hours/0 units

Name of the course coordinator (if there is more than one, please state):

M.M. Mustafa Ahmed Abdel **Email:**mustafs.abed.ims2401@atu.edu.iq

Course objectives

Course objectives **Study**	- To inform students about the crimes of the Ba'ath regime in Iraq against humanity and the people. - The student should be able to identify the types of crimes committed within the country and the... Y What distinguishes them from t h e r e A it m e **Humanity** - Identifying the arbitrary behaviors of the Ba'ath regime and its violations of rights and freedoms. - Introducing students to the effects of biological warfare and genocide against the people.

Teaching and learning strategies

strategy	1 - To learn about the political systems in Iraq. 0 – Identifying the Ba'athist regime's violations of rights and freedoms. 3 – Identifying the psychological mechanisms employed by the Ba'athist regime. 4 – Identifying the Ba'athist regime's crimes against religion and the state.

1. Course structure

Week	Hours	Required learning outcomes:	Unit name d The subject or topic	Learning method	Evaluation Method
1	0n	Identifying the systems Politics in Iraq	Overview A brief overview of the systems Politics The diaspora in Iraq (1901- 0223) "The monarchy, the The public Reign (1928-1968), The Covenant Mahuri (Baathist 1968- 0223)	a lecture	General questions and discussions
0	0n	Identifying violations Ba'athist system of rights and freedoms	violation T Ba'athist system of rights And freedom T Public rights and freedoms Intellectual and violation, violation Rights Intellectual freedoms, violation of The general and political rights, violation of the right to pluralism partisanship	a lecture	General questions and discussions + Exam
3	0n	Identifying violations Ba'athist system of rights social	violations T Which social rights and the politic Cultural and social rights violations, Opinion, a including the denial of citizenship. Meeting The other, violation of rights And freedom T Cultural issues, violation of the countries law, the First Gulf War, the The second international embargo on Iraq Because of the invasion of Kuwait	a lecture	Group duties and An exam
4	0n	Identifying behaviors The randomness of the Ba'athist regime	The effect of the totalitarian regime's methods The community and its control over the state: Arrest No randomness and torture Prisoner and executions, arrests arbitrariness For suspects and torture The prisoners, the execution of the soldiers And civilians,	a lecture	General questions and discussions Or an exam
2	0n	Understanding the Ba'ath Party's role in concentrating power in its hands	Restricting the The three strokes are in the hands Baathist : of the system of separation of powers. authorities Governance under the system Executive (legislative and judicial), TheR Party affiliations to restrict Salt Tyranny in corruption Brother no and fighting scientists	a lecture	General questions and discussions
6	0n	Identifying the stage Transitional in combating authoritarian policy	The effect of the transitional phase in TheS combating authoritarianism: a concept Justice no Transitional justice and its The concept of mechanisms for implementation: Transitional justice and its advantages. calFm Transitional justice	a lecture	Group duties and discussion
7	0n	Identifying the mechanisms	The field Psychological: Psychological mechanisms	a lecture	General questions

		The psychology he followed Ba'athist regime	And social The scarcity phenomenon, which The rulingwas used by the previous regime And stingiTnheessphenomenon of distraction, horror the mechanism of intimidation, the mech anism of pressure and punishmePnstychological, ethnic cleansing, HorizoSncientific and cultural		
8	0n	Knowing the method that The Ba'athist regime reduced it to Reducing the homeland to his own l	The ruling oTfhtehfeamily and reduction of the homelanc to subjective ö The ruler, the ruler's dialectic And theBetween hypocrisy and injustice, ndAsnd strengthepnrainisgetihseparamount; loyalty comes a n d		Short exam
9	0n	Identifying the Ba'athist crimes in fighting religion and the state	A Religion an state: Crimes of preventing the teachings dissemination of religious knowledge an and knowledg " e Crimes of preventing the religious and m issemination of teachings that are bas murders Scholars and religious youth, And he bannedrelthiegious parties, reference religious The religious seminary, prohibited parties In general, and religious In particular	a lecture confiscating the flag d on science and knowledge.	General questions and disc
12	0n	Getting to know the method The Ba'ath Party's control over the media and militarization of society	Culture and Media and militarization of society: soldiers The educational institution militarization oMf ethdeia discourse, militarization Literature and Art	a lecture	General questions
11	0n	Identifying the effects of wars Biological	The effect oTfhtheeuqsuemof weapons in warfare And the and environmental damage Muharram ö Internationally and environmental pol ution hLabja - Basra"	a lecture	Discussion and Exam short
10	0n	Identifying Baathist crimes In burning the wells	Political Scorched Earth: Battle Ja River SOil and its environmental August bumimingpacts, oil fields, minefields And the leftoversWarfare, bombing of cities T Iraqi	a lecture	General questions and disc
13	0n	The effect of draining the marshes Forced migration	drying a Lahwar and the straw migration: The concepAtnd the importance of the system's role The e x t i n c t Y Draining the marshes, the effects The resultThe draining of the marshes	a lecture	Group duties discussion
14	0n	Getting to know the method destruction of the agricultural environm Animal	Destroying thAegricultural and animal ent And the feonllvoiwroingment, radiation level: Al-Dujail, dredging Palm groves, Basra,	a lecture	Discussion and Exam short
12	0n	Understanding the role of the Ba'ath In mass graves	cemeteries Collective bombing of homes worship	a lecture	Short exam

Course evaluation

The grade is distributed as follows: (First month exam: 2 marks / Second month exam: 2 marks / Daily assessment: 12 marks, including "scientific reports, scientific interaction, actual attendance, oral exam, and quiz" / Final exam: 22 marks. Total: 122 marks)

Learning and teaching resources

Required textbooks (methodology, if applicable)	Curriculum of the h e a d B q e u f a r t e e t h s e Ministry of Higher Education and Scientific Research N
Main references (sources)	
Recommended supporting books and references (scientific journals,	

Reports...		
Electronic references, websites		