

Ministry of Higher Education and Scientific Research

Scientific Supervision and Evaluation Authority

Department of Quality Assurance and Academic Accreditation

## Academic program description form for colleges For the academic year 2023-2024

University name: Southern Technical University

College name: Technical Institute / Shatrah

Scientific Department: Department of Agricultural Mechanization Techniques


File filling date: 1/8/2023

Head Of Department Name: Malik Reihan Rshieh

signature: 

Date: 1/8/2023

Name of the Associate Dean for Scientific Affairs: Assistant Lect. Turki Diwan Hussein

signature: 


Date:

Department of Quality Assurance and University Performance

Name of the Director of the Department of Quality Assurance and University Performance: Haider Hussain Naseer

signature: 

Date: 2023/8/1

  
Dean's Endorsement

Prof. Dr. No-eflag A - Al-Hisnawi

## Academic Program Description

This academic program description provides a brief summary of the most important characteristics of the program and the learning outcomes expected of the student to achieve, proving whether he has made the most of the available opportunities .It is accompanied by a description of each course within the program

Ministry of Higher Education and Scientific Research	1. Educational institution
Technical Institute / Shatra	2. Scientific Department/ Center
Department of agricultural mechanization techniques	3. Academic or professional program name
Technical Diploma	4. Final certificate name
semester system	5. school system
Theoretical and practical study	6. Accreditation Program approved
Laboratories , field field, library, internet, agricultural and industrial institutions and agricultural projects	7. Other external influences
2024-2023	8. Description creation date
9. The objectives of the academic program : Granting the student a diploma in the theoretical and practical aspects to serve the preparation of a graduate of a distinguished level and his commitment to the practical arena	
1.	Knowledge and understanding of the sciences related to agricultural mechanization and related local, regional and international standards
2.	Scientific skills assessment and clarification of a fake agricultural mechanization
3.	Thinking and analysis skills that enable solving emerging problems in the field of agricultural mechanization techniques
4.	Skills to use ,maintain, repair and develop agricultural

mechanization techniques that enable it to compete with others in the labor market

#### 10. Required program outcomes and methods of teaching, learning and assessment

##### A -Cognitive goals

O1 -delivery of information acquired for the field of agricultural mechanization techniques E .Lee beneficiaries and linking them to other science to reach a solution to the problems related to different agricultural operations.

##### A2 -Acquisition and proof Efficiency in

a Maha ra t laboratory Specialized Titles for its For for the application of in a The field of agricultural mechanization.

O3 -demonstrate the ability to analyze relevant experimental measurements of the specialization of mechanization of agricultural techniques and accuracy E .Reports on observations and analysis counter.

A4- Clearly communicate and discuss scientific concepts, empirical results and analytical arguments, and briefly orally and in writing.

A5 - Develop appropriate technology to solve farmers' problems and encourage research aimed at progress in all disciplines for long-term technical development.

A - 6 Attracting qualified and talented scientific cadres to conduct scientific research at the Institute.

A 7- To deliver knowledge and technology to farmers and farmers on a larger scale through training workers and officials of the agricultural administration on recent developments in all fields through specialists.

##### B - Skills objectives of the program

B - 1 conduct laboratory and field trials, as well as a statistical analysis and interpretation of data results.

B - 2 Preparing and submitting research reports on agricultural mechanization.

B - 3 communication with professionals and non - professionals involved in agricultural cooperation and the private sector.

B-4 - Developing and using computer programs in the fields of designing and analyzing agricultural experiments.

#### Teaching and learning methods

- Providing students with the basics and additional topics related to previous learning outcomes of skills , to solve practical problems.
- Applying the topics studied in theory on a practical level.
- Asking students, during practical lessons, to conduct some applied research and

under the supervision of their professors.

- A visit to the practical laboratories and workshops of the Department of Agricultural Mechanization Techniques by the academic staff.

#### Evaluation methods

- Daily and monthly exams
- Semester and final exams
- Participation scores for competition questions for academic subjects
- Scores for homework and report writing

#### C -Emotional and value goals

C1 -Applying knowledge in agricultural mechanization sciences in order to address agricultural problems.

C2 - Design and implementation of agricultural scientific experiments, as well as analysis and interpretation of data.

C3 - Designing an integrated or partial agricultural system or following a treatment system to meet the required agricultural needs within realistic restrictions related to the economy, environment, health and safety.

C -4 Demonstrate the creative and innovative ability to use special mechanization in agriculture

C5 - Use of modern techniques, skills and tools necessary for agricultural technical practices.

d -Transferred general and rehabilitative skills ) other skills related to employability and personal development. (

D1 -Diagnose and treat problems related to agricultural mechanization.

D 2 - Enable students to pass job interviews.

D3 - Enable students to pass professional exams organized by local, regional and international bodies.

D 4 - Enable students to develop continuous self-development after graduation.

12. Certifications and Credit Hours	11. Program structure			
	Credit hours	Course or course name	Course or course code	level/year
The degree of the Technical Diploma Require (x) credit hours				first 2023
				first 2023

132				first 2023
				first 2023
				first 2023
				first 2023

### 13. Planning for personal development

- Enable requester from Use skills Empowerment self
- Ability On Analysis and give Instructions
- skills Solve problems the operation
- Knowledge and understanding
- education students from Use Modern technologies in agricultural machinery
- education students to prepare Preparing agricultural mechanization for use in agricultural fields
- education students On how to maintain the different systems in the machines
- education Students on how to use turning machines, coolers and maintenance in the workshops
- education students On the use of modern irrigation systems
- education students on modern computer systems

### 14. Acceptance criterion) Od p regulations relating to attend the college or institute(

Central / according to the requirements of the Ministry of Higher Education and Scientific Research

### 15. The most important sources of information about the program

- .1The Central Library in the AD era
- .2Internet information network
- .3The experiences of Arab and international universities
- .4Current Curriculum

Curriculum Skills Outline											
Please check the boxes corresponding to the individual learning outcomes from the program being evaluated											
Learning outcomes required from the program											
General and Transferable Skills )or ( Other skills related to employability and personal development				thinking skills				Subject-specific skills			
D4	d3	D2	d1	c4	c3	c2	c1	b4	b3	b2	b1
		√				√			√		
		√				√			√		
		√				√			√		
	√					√			√		
	√				√					√	
		√				√					√
		√				√			√		
		√				√			√		
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## n course description form

### Course description

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

Technical Institute / Shatra	1. Educational institution
Department of agricultural mechanization techniques	2. Scientific Department / Center
Farm tractors	3. Course name / code
Teaching attendance	4. Available forms of attendance
Chapter Autumnal / Phase A Crown	5. season / year
34hours in the fall semester theoretical and practical	6. Number of hours of study ) total(
1/8/2023	7. The date this description was prepared
8. Course Objectives : Granting the student a diploma in the theoretical and practical aspects to serve the preparation of a graduate of a distinguished level and his commitment to the practical arena.	





C - emotional and value goals.

C -1 Enable the student to apply theoretical information in a practical way.

C -2 To develop the patriotic spirit of the student to increase production in quantity and quality.

C - 3 Instilling the concept of community service and the best way to deal with the simple strata of society, the peasants and farmers.

C - 4 Develop professional ethics . Agricultural engineer among students by following the correct professional behavior.

D - Transferred general and rehabilitative skills ) other skills related to employability and personal development.(

D-1

D-2

D-3

D-4

## 10. Course structure

Evaluation method	education method	Unit name / course or topic	Required learning outcomes	hours	the week
Questions and answers mini practical lesson	Lecture and practical lesson	Tractor development history, tractor design progress, important of tractors as a power source, types of farm tractors	My knowledge and skills	2 theoretical 4 practical	the first
ask questions	Lecture and	Tractor	knowledge and skills	2 theoretical 4 practical	The second

	practical lesson	components, basic operation of farm tractors, types of engines, engine comparison, internal engine output.			
Listen and ask questions	Lecture and practical lesson	internal engine parts.	knowledge and skills	2 theoretical 4 practical	the third
Practical exercise, meeting and work groups	Lecture and practical lesson	The fuel engine system, components, the function of each part, how the system works.	knowledge and skills	2 theoretical 4 practical	the fourth
Practical exercise, meeting and work groups	Lecture and practical lesson	Intake and exhaust system, turbocharged.	knowledge and skills	2 theoretical 4 practical	Fifth
Mini Lesson Discussion Practical	Lecture and practical lesson	Engine cooling system,	knowledge and skills	2 theoretical 4 practical	VI

Exercise and Workgroups		types, components, how each system works, major rentals of the cooling system.			
Case study Practical exercise and work groups	Lecture and practical lesson	The electrical system of the engine, its types, components, charging, ignition circuits, lubrication system, types, components.	knowledge and skills	2 theoretical 4 practical	seventh
Listening and asking practical exercise questions and work groups	Lecture and practical lesson	Powertrain clutch, its types, clutch opening mechanisms.	knowledge and skills	2 theoretical 4 practical	VIII
Asking questions and listening practical exercise and work	Lecture and practical lesson	farm tractor transmission, mechanical transmission	knowledge and skills	2 theoretical 4 practical	ninth

groups		tasks, sliding gears, fixed grille, hydraulic transmission			
Ask group work questions	Lecture and practical lesson	Differentials, differential lock components, function, way they work, final drive function , system types, components, how the system works.	knowledge and skills	2 theoretical 4 practical	The tenth
Mini-lesson work groups	Lecture and practical lesson	power draw motors )PTO ,(power delivery methods, drawbar, couplings, hydraulic system.	knowledge and skills	2 theoretical 4 practical	eleventh
Practical exercise and workgroups	Lecture and practical lesson	<b>Steering system in</b>	knowledge and skills	2 theoretical 4 practical	twelveth

		<b>agricultural tractors, types of components, how the system works, major rentals.</b>			
ask questions	Lecture and practical lesson	<b>Tractor braking system, types of components, mode of operation of the system, main rentals.</b>	knowledge and skills	2 theoretical 4 practical	Thirteenth
Asking practice questions	Lecture and practical lesson	<b>Agricultural tractor wheels and tires, modified.</b>	knowledge and skills	2 theoretical 4 practical	fourteenth
Test	Lecture and practical lesson	<b>Maintenance of agricultural tractors, processing</b>			Fifteenth

**of  
agricultural  
tractors for  
storage.**

**11. course development plan**

- Providing the possibility of academic support in organizing field visits.
- Providing the appropriate classroom environment that enables the teacher to diversify teaching strategies.
- Providing information technology in the campus library.
- Hosting experts from outside the institute , or from the work environment for which they are preparing to benefit from their expertise in developing the course according to the actual needs of the labor market.

**12. Infrastructure**

The systematic book of winter field crops	.1Required course books
Supporting resources for each course	.2Main references ) sources(
Scientific journals, as well as research, letters and theses of professors in the same specialty	a . Recommended books and references ) scientific journals , reports(0000 ,
Location <a href="http://www.google.com">www.google.com</a>	b . Electronic references , websites

**course description form**

**Course description**

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



## A - cognitive goals

A1 Identifying the nature and properties of soil as a medium for the activity of various agricultural mechanization activities and creating an appropriate seedbed

## B - Skills objectives of the program

B1 Possibility of analyzing soil characteristics to determine the type and size of agricultural mechanization needed to serve the crop.

## Teaching and learning methods

Giving scientific and theoretical lectures through displays, powerpoints, slides, microscopes, experiments in examining plant samples, using various laboratory equipment and equipment, and a wooden canopy.

## Evaluation methods

Take daily quick exams Quizzes  
 Conducting monthly exams  
 Conducting semester and final exams

## C - emotional and value goals.

C -1 Enable the student to apply theoretical information in a practical way.

C -2 To develop the patriotic spirit of the student to increase production in quantity and quality.

C - 3 Instilling the concept of community service and the best way to deal with the simple strata of society, the peasants and farmers.

C - 4 Develop professional ethics . Agricultural engineer among students by following the correct professional behavior.

D - Transferred general and rehabilitative skills ) other skills related to employability and personal development.(

D-1

D-2

D-3

D-4



Evaluation method	education method	Unit name / course or topic	Required learning outcomes	hours	the week
Questions and answers mini practical lesson	Lecture and practical lesson	Soil science - definition and branches - applied value.	knowledge and skills	2 theoretical 3 practical	the first
ask questions	Lecture and practical lesson	The rocks that make up the parent material.	knowledge and skills	2 theoretical 3 practical	The second
Listen and ask questions	Lecture and practical lesson	A study of the physical properties of soil - bulk density.	knowledge and skills	2 theoretical 3 practical	the third
Practical exercise, meeting and work groups	Lecture and practical lesson	true density.	knowledge and skills	2 theoretical 3 practical	the fourth
Practical exercise, meeting and work groups	Lecture and practical lesson	soil porosity.	knowledge and skills	2 theoretical 3 practical	Fifth
Mini Lesson Discussion Practical Exercise and Workgroups	Lecture and practical lesson	Soil texture (texture.(	knowledge and skills	2 theoretical 3 practical	VI
Case study Practical exercise and work groups	Lecture and practical lesson	Soil water - soil temperature.	knowledge and skills	2 theoretical 3 practical	seventh
Listening and asking practical	Lecture and practical lesson	soil air.	knowledge and skills	2 theoretical 3 practical	VIII

exercise questions and work groups					
Asking questions and listening practical exercise and work groups	Lecture and practical lesson	soil salinity.	knowledge and skills	2 theoretical 3 practical	ninth
Ask group work questions	Lecture and practical lesson	Soil fertility - fertilizing the soil.	knowledge and skills	2 theoretical 3 practical	The tenth
Mini-lesson work groups	Lecture and practical lesson	Soil organic matter.	knowledge and skills	2 theoretical 3 practical	eleventh
Practical exercise and workgroups	Lecture and practical lesson	Morphological evidence of soil.	knowledge and skills	2 theoretical 3 practical	twelveth
ask questions	Lecture and practical lesson	Differentiation of its layers and the formation and development of the complex soil.	knowledge and skills	2 theoretical 3 practical	Thirteenth
Asking practice questions	Lecture and practical lesson	Study the color of the soil.	knowledge and skills	2 theoretical 3 practical	fourteenth
Test	Lecture and practical lesson	General classification of soil.			Fifteenth

### 23. course development plan

- Providing the possibility of academic support in organizing field visits.
- Providing the appropriate classroom environment that enables the teacher to diversify teaching strategies.
- Providing information technology in the campus library.
- Hosting experts from outside the institute , or from the work environment for which they are preparing to benefit from their expertise in developing the course

according to the actual needs of the labor market.

#### 24. Infrastructure

The systematic book of winter field crops

.1Required course books

Supporting resources for each course

.2Main references ) sources(

Scientific journals, as well as research, letters and theses of professors in the same specialty

a . Recommended books and references ) scientific journals , reports(0000 ,

Location [www.google.com](http://www.google.com)

b . Electronic references , websites

## course description form

### Course description

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



Teaching and learning methods
Giving scientific and theoretical lectures through displays, powerpoints, slides, microscopes, experiments in examining plant samples, using various laboratory equipment and equipment, and a wooden canopy.
Evaluation methods
Take daily quick exams Quizzes Conducting monthly exams Conducting semester and final exams
C - emotional and value goals. C -1 Enable the student to apply theoretical information in a practical way. C -2 To develop the patriotic spirit of the student to increase production in quantity and quality. C - 3 Instilling the concept of community service and the best way to deal with the simple strata of society, the peasants and farmers. C - 4 Develop professional ethics . Agricultural engineer among students by following the correct professional behavior.
D - Transferred general and rehabilitative skills ) other skills related to employability and personal development.( D-1 D-2 D-3 D-4

### 34. Course structure

Evaluation method	education method	Unit name / course or topic	Required learning outcomes	hours	the week
Questions and	Lecture and	<b>Field crop and field</b>	knowledge	2 theoretical	the first

answers mini practical lesson	practical lesson	<b>crop division</b>	and skills	3 practical	
ask questions	Lecture and practical lesson	<b>Soil service operations / Tilling- a their importance- time E puppies- Softening- settlement- Amendment</b>	knowledge and skills	2 theoretical 3 practical	The second
Listen and ask questions	Lecture and practical lesson	<b>Methods of cultivation of crops - patching and weeding - Khuff- fertilization- irrigation - control</b>	knowledge and skills	2 theoretical 3 practical	the third
Practical exercise, meeting and work groups	Lecture and practical lesson	<b>Cereal crops - wheat- barley</b>	knowledge and skills	2 theoretical 3 practical	the fourth
Practical exercise, meeting and work groups	Lecture and practical lesson	<b>Cereal crops- maize - rice</b>	knowledge and skills	2 theoretical 3 practical	Fifth
Mini Lesson Discussion Practical Exercise and Workgrou ps	Lecture and practical lesson	<b>Oil crops - cotton- sunflower</b>	knowledge and skills	2 theoretical 3 practical	VI

Case study Practical exercise and work groups	Lecture and practical lesson	<b>Leguminous crops- jet - alfalfa</b>	knowledge and skills	2 theoretical 3 practical	sevent h
Listening and asking practical exercise questions and work groups	Lecture and practical lesson	<b>Leguminous crops- beans - lentils</b>	knowledge and skills	2 theoretical 3 practical	VIII
Asking questions and listening practical exercise and work groups	Lecture and practical lesson	<b>The effect of environmental and soil factors on the production of horticultural crops</b>	knowledge and skills	2 theoretical 3 practical	ninth
Ask group work questions	Lecture and practical lesson	<b>Methods of propagation of horticultural plants include-1 sexual reproduction -2 asexual reproduction</b>	knowledge and skills	2 theoretical 3 practical	The tenth
Mini- lesson work groups	Lecture and practical lesson	<b>Transplanting and E product of seedlings - the benefits of planting - Effect of transplanting on plant growth</b>	knowledge and skills	2 theoretical 3 practical	eleve nth
Practical	Lecture	<b>Establishment of fruit</b>	knowledge	2	twelv

exercise and workgroups	and practical lesson	<b>orchards</b>	and skills	theoretical 3 practical	eth
ask questions	Lecture and practical lesson	<b>Breeding and pruning a fruit trees</b>	knowledge and skills	2 theoretical 3 practical	Thirteenth
Asking practice questions	Lecture and practical lesson	<b>citrus production</b>	knowledge and skills	2 theoretical 3 practical	fourteenth
Test	Lecture and practical lesson	<b>Rules of a basic in gardens and parks planning</b>			Fifteenth

### 35. course development plan

- Providing the possibility of academic support in organizing field visits.
- Providing the appropriate classroom environment that enables the teacher to diversify teaching strategies.
- Providing information technology in the campus library.
- Hosting experts from outside the institute , or from the work environment for which they are preparing to benefit from their expertise in developing the course according to the actual needs of the labor market.

### 36. Infrastructure

The systematic book of winter field crops	.1Required course books
Supporting resources for each course	.2Main references ) sources(
Scientific journals, as well as research, letters and theses of professors in the same specialty	a . Recommended books and references ) scientific journals , reports(0000 ,
Location <a href="http://www.google.com">www.google.com</a>	b . Electronic references , websites



## course description form

### Course description

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

Technical Institute / Shatra	37. Educational institution
Department of agricultural mechanization techniques	38. Scientific Department / Center
Animal production	39. Course name / code
Blended/ present and e -learning	40. Available forms of attendance
Autumn semester / first stage	41. season / year
34hours of theoretical and practical class	42. Number of hours of study ) total(
1/8/2023	43. The date this description was prepared

44. Course Objectives : Granting the student a diploma in the theoretical and practical aspects to serve the preparation of a graduate of a distinguished level and his commitment to the practical arena.

45. Course outcomes and methods of teaching, learning and assessment

A- Cognitive goals

A1 -Teaching the student to raise farm animals (sheep and cows) as well as poultry from the standpoint

Management, proper nutrition and the purpose of this study.

A - 2\_Introducing the student to the economic importance of farm animals.

B - Skills objectives of the program

B1 - Introducing the student to the types of farm animals - types of fields - education - nutrition.

B 2 -Training the student on the components of the fields, such as tools, devices, field operations, and how to

Conduct it as well as define and train it on records.

Teaching and learning methods

Giving scientific and theoretical lectures through displays, powerpoints, slides, microscopes, experiments in examining plant samples, using various laboratory equipment and equipment, and a wooden canopy.

Evaluation methods

Take daily quick exams Quizzes

Conducting monthly exams

Conducting semester and final exams

C - emotional and value goals.  
 C -1 Enable the student to apply theoretical information in a practical way.  
 C -2 To develop the patriotic spirit of the student to increase production in quantity and quality.  
 C - 3 Instilling the concept of community service and the best way to deal with the simple strata of society, the peasants and farmers.  
 C - 4 Develop professional ethics . Agricultural engineer among students by following the correct professional behavior.

D - Transferred general and rehabilitative skills ) other skills related to employability and personal development.(  
 D-1  
 D-2  
 D-3  
 D-4

#### 46. Course structure

Evaluation method	education method	Unit name / course or topic	Required learning outcomes	hours	the week
Questions and answers mini practical lesson	Lecture and practical lesson	The economic importance of poultry farming - the poultry industry in Iraq.	knowledge and skills	2 theoretical 2 practical	the first
ask questions	Lecture and practical lesson	Types of poultry production - unloading - incubation - poultry farming requirements.	knowledge and skills	2 theoretical 2 practical	The second
Listen and ask questions	Lecture and practical lesson	Egg production - breeds of	knowledge and skills	2 theoretical 2 practical	the third

		laying hens - broiler breeding systems - factors affecting egg production.			
Practical exercise, meeting and work groups	Lecture and practical lesson	Meat production, broiler chicken breeds, broiler breeding requirements, factors affecting the economic characteristics of broiler chickens.	knowledge and skills	2 theoretical 2 practical	the fourth
Practical exercise, meeting and work groups	Lecture and practical lesson	Hatching and hatching management - hatching - hatching machine.	knowledge and skills	2 theoretical 2 practical	Fifth
Mini Lesson Discussion Practical Exercise and Workgroups	Lecture and practical lesson	Factors affecting the quality of hatching eggs - specifications of eggs suitable for hatching.	knowledge and skills	2 theoretical 2 practical	VI
Case study Practical exercise and work groups	Lecture and practical lesson	The economic importance of sheep.	knowledge and skills	2 theoretical 2 practical	seventh
Listening	Lecture and	Sheep	knowledge	2 theoretical 2	VIII

and asking practical exercise questions and work groups	practical lesson	classification - global sheep breeds.	and skills	practical	
Asking questions and listening practical exercise and work groups	Lecture and practical lesson	Reproduction - pregnancy - birth in sheep.	knowledge and skills	2 theoretical 2 practical	ninth
Ask group work questions	Lecture and practical lesson	Milk production and wool production in sheep.	knowledge and skills	2 theoretical 2 practical	The tenth
Mini-lesson work groups	Lecture and practical lesson	Goat Breeds - Goat Breeding.	knowledge and skills	2 theoretical 2 practical	eleventh
Practical exercise and workgroups	Lecture and practical lesson	The economic importance of cows.	knowledge and skills	2 theoretical 2 practical	twelveth
ask questions	Lecture and practical lesson	Classification of cows and their types.	knowledge and skills	2 theoretical 2 practical	Thirteenth
Asking practice questions	Lecture and practical lesson	The foundations of milk and meat production in cows.	knowledge and skills	2 theoretical 2 practical	fourteenth
Test	Lecture and practical lesson	Cow field management.			Fifteenth

#### 47. Infrastructure

The systematic book of winter field crops

.1Required course books

Supporting resources for each course

.2Main references ) sources(

Scientific journals, as well as research, letters and theses of professors in the same specialty	a . Recommended books and references ) scientific journals , reports(0000 ,
Location <a href="http://www.google.com">www.google.com</a>	b . Electronic references , websites

#### 48. course development plan

- Providing the possibility of academic support in organizing field visits.
- Providing the appropriate classroom environment that enables the teacher to diversify teaching strategies.
- Providing information technology in the campus library.
- Hosting experts from outside the institute , or from the work environment for which they are preparing to benefit from their expertise in developing the course according to the actual needs of the labor market.

## **course description form**

### **Course description**

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

Technical Institute / Shatra	49. Educational institution
Department of agricultural mechanization techniques	50. Scientific Department / Center
Internal combustion engines	51. Course name / code
Blended/ present and e -learning	52. Available forms of attendance
Spring semester / first stage	53. season / year
34hours of theoretical and practical class	54. Number of hours of study ) total(
1/8/2023	55. The date this description was prepared

56. Course Objectives : Granting the student a diploma in the theoretical and practical aspects to serve the preparation of a graduate of a distinguished level and his commitment to the practical arena.

57. Course outcomes and methods of teaching, learning and assessment

A - cognitive goals

**A -1 Introducing the student to internal combustion engines and their development - engine designs and manufacturing - identifying the engines' performance and capabilities and how to operate ,use and maintain them.**

**A2 :\_Introducing the student to the engines, their development, designs and classification - Training the student in calculations**

**Sports in the engine performance, parts, thermal cycles introduce students to combustion in engines**

**Diesel and Gasoline - Turbo, Wankel, Exhaust and Pollution Tests.**

B - Skills objectives of the program

B1 - The student is able to operate the engines

B2 - : Enable the student to know the importance of each part of the engine and

the way it works

#### Teaching and learning methods

Giving scientific and theoretical lectures through displays, powerpoints, slides, microscopes, experiments in examining plant samples, using various laboratory equipment and equipment, and a wooden canopy.

#### Evaluation methods

Take daily quick exams Quizzes  
Conducting monthly exams  
Conducting semester and final exams

C - emotional and value goals.

C -1 Enable the student to apply theoretical information in a practical way.

C -2 To develop the patriotic spirit of the student to increase production in quantity and quality.

C - 3 Instilling the concept of community service and the best way to deal with the simple strata of society, the peasants and farmers.

C - 4 Develop professional ethics . Agricultural engineer among students by following the correct professional behavior.

D - Transferred general and rehabilitative skills ) other skills related to employability and personal development.(

D-1

D-2

D-3

D-4

#### 58. Course structure

Evaluation method	education method	Unit name / course or topic	Required learning outcomes	hours
Questions and answers	Lecture and practical lesson	A brief history of the development and design	My knowledge	1theoretical 3 practi



mini practical lesson		of engines and their classification.	and skills	
ask questions	Lecture and practical lesson	Ideal and true thermal cycles for four-stroke mug-ignition (gasoline) engines.	knowledge and skills	1theoretical 3 practi
Listen and ask questions	Lecture and practical lesson	Ideal and true thermal cycles for compression ignition (diesel) four-stroke engines.	knowledge and skills	1theoretical 3 practi
Practical exercise, meeting and work groups	Lecture and practical lesson	Ideal and true thermal cycles for two-stroke gasoline and diesel engines.	knowledge and skills	2theoretical 4 practi
Practical exercise, meeting and work groups	Lecture and practical lesson	Identify the four-stroke valve timing mechanism and compare it with the pressure-volume curve.	knowledge and skills	2 theoretical 4 prac
Mini Lesson Discussion Practical Exercise and Workgroups	Lecture and practical lesson	Fixed and moving parts of an internal combustion engine.	knowledge and skills	2 theoretical 4 prac
Case study Practical exercise and work groups	Lecture and practical lesson	Measuring transactions engine performance data internal combustion) - graphical ability - Faramlah capability - the ability frictional(	knowledge and skills	2 theoretical 4 prac
Listening and asking practical exercise questions and work groups	Lecture and practical lesson	Identification of the size of the sweep and the size of the clearance-compression ratio-engine capacity.	knowledge and skills	2 theoretical 4 prac

Asking questions and listening practical exercise and work groups	Lecture and practical lesson	Types of efficiencies (mechanical - thermal- volumetric) - work done in the cylinder - specific fuel consumption.	knowledge and skills	2 theoretical 4 prac
Ask group work questions	Lecture and practical lesson	Friction and lubrication in the engine - mechanical friction in the elbow - mechanical friction of the piston - the effect of the number of rings.	knowledge and skills	2 theoretical 4 prac
Mini-lesson work groups	Lecture and practical lesson	Combustion - combustion in diesel engines - combustion in gasoline engines - stages of combustion.	knowledge and skills	2 theoretical 4 prac
Practical exercise and workgroups	Lecture and practical lesson	The combustion chamber - basic requirements for a good combustion chamber - principles of design of the combustion chamber- types of combustion chambers.	knowledge and skills	2 theoretical 4 prac
ask questions	Lecture and practical lesson	Fuel - Mug ignition engine fuel - octane number of gasoline - diesel fuel - cetane number in diesel fuel.	knowledge and skills	2 theoretical 4 prac
Asking practice questions	Lecture and practical lesson	Rotary engines Working principle - the air cycle in the turbine as a result of burning when pressure is stable - the use of turbine engines.	knowledge and skills	2 theoretical 4 prac
test	Lecture and practical lesson	Exhaust gas tests - Gas pollution - Exhaust gas vehicles for mug ignition		

engines - Exhaust gas vehicles for diesel engines - Control to reduce types of exhaust pollution to improve the environment.

#### 59. course development plan

- Providing the possibility of academic support in organizing field visits.
- Providing the appropriate classroom environment that enables the teacher to diversify teaching strategies.
- Providing information technology in the campus library.
- Hosting experts from outside the institute , or from the work environment for which they are preparing to benefit from their expertise in developing the course according to the actual needs of the labor market.

#### 60. Infrastructure

The systematic book of winter field crops	.1Required course books
Supporting resources for each course	.2Main references ) sources(
Scientific journals, as well as research, letters and theses of professors in the same specialty	a . Recommended books and references ) scientific journals , reports(0000 ,
Location <a href="http://www.google.com">www.google.com</a>	b . Electronic references , websites

## course description form

### Course description



**A - cognitive goals**

**A : 1** Training students on the types and methods of welding for use in repairs of equipment and machinery.

**A .2** : Introducing and training the student on the components of welding devices and how to use them.

**B - Skills objectives of the program**

**B1** - The student will be able to perform various welding operations using gas welding and the cutting process

Gas and electric arc welding process in its various forms.

**B2** - : Enable the student to know the types of metal and methods of welding each type of metal

**Teaching and learning methods**

Giving scientific and theoretical lectures through displays, powerpoints, slides, microscopes, experiments in examining plant samples, using various laboratory equipment and equipment, and a wooden canopy.

**Evaluation methods**

Take daily quick exams Quizzes

Conducting monthly exams

Conducting semester and final exams

**C - emotional and value goals.**

**C -1** Enable the student to apply theoretical information in a practical way.

**C -2** To develop the patriotic spirit of the student to increase production in quantity and quality.

**C - 3** Instilling the concept of community service and the best way to deal with the simple strata of society, the peasants and farmers.

**C - 4** Develop professional ethics . Agricultural engineer among students by following the correct professional behavior.

D - Transferred general and rehabilitative skills ) other skills related to employability and personal development.(

D-1

D-2

D-3

D-4

## 70. Course structure

Evaluation method	education method	Unit name / course or topic	Required learning outcomes	hours	the week
Questions and answers mini practical lesson	Lecture and practical lesson	Welding device (oxyacetylene) Device components How to read and organize the device's measurements How to get the right torch How to use the welding torch and the cutting head.	knowledge and skills	4 practical	the first
ask questions	Lecture and practical lesson	A practical exercise on welding and gas leakage in a straight line using iron wires and rails How to use the welding torch The correct grip of the handle and how to weld.	knowledge and skills	4 practical	The second
Listen and ask questions	Lecture and practical lesson	A practical exercise on welding and gas deposition in the form of a letter ) V ( using iron wire and brass.	knowledge and skills	4 practical	the third
Practical exercise, meeting and work groups	Lecture and practical lesson	A practical exercise on welding and gas deposition in the form of a letter ) L. (	knowledge and skills	4 practical	the fourth
Practical exercise,	Lecture and	A practical exercise on gas cutting - how	knowledge and skills	4 practical	Fifth

meeting and work groups	practical lesson	to cut metal pieces - using the cutting head.			
Mini Lesson Discussion Practical Exercise and Workgroups	Lecture and practical lesson	Practical exercise on gas cutting using guide tools - how to cut with gas straight.	knowledge and skills	4 practical	VI
Case study Practical exercise and work groups	Lecture and practical lesson	Electric arc welding device - identifying the device and the stationary electric current generators that operate with the engine - and identifying the electrodes and wire and its relationship to the electric current - and the types of wires.	knowledge and skills	4 practical	seventh
Listening and asking practical exercise questions and work groups	Lecture and practical lesson	A practical exercise on welding and deposition by electric arc in a straight line, using iron wires suitable for the current.	knowledge and skills	4 practical	VIII
Asking questions and listening practical exercise and work groups	Lecture and practical lesson	A practical exercise on welding and deposition of the electric arc in a zigzag manner, using suitable iron wires.	knowledge and skills	4 practical	ninth
Ask group work questions	Lecture and practical lesson	A practical exercise in welding and deposition by electric arc in an oval shape using iron wires suitable for the current.	knowledge and skills	4 practical	The tenth
Mini-	Lecture an	A practical exercise	knowledge and	4 practical	eleve

lesson work groups	d practical lesson	on welding and deposition by electric arc in the form of a letter) V ( Using iron wires suitable for the current.	skills		nth
Practical exercise and workgroups	Lecture and practical lesson	A practical exercise on welding and deposition by electric arc in the form of a letter ) L ( using suitable iron wire.	knowledge and skills	4 practical	twelv eth
ask questions	Lecture and practical lesson	Practical exercise on welding and deposition by electric arc (angle welding.(	knowledge and skills	4 practical	Thirt eenth
Asking practice questions	Lecture and practical lesson	A practical exercise on welding and deposition by electric arc (vertical welding.(	knowledge and skills	4 practical	fourt eenth
Test	Lecture and practical lesson	Practical exercise on welding two pieces together (by electric arc.(			Fifte enth

### 71. course development plan

- Providing the possibility of academic support in organizing field visits.
- Providing the appropriate classroom environment that enables the teacher to diversify teaching strategies.
- Providing information technology in the campus library.
- Hosting experts from outside the institute , or from the work environment for which they are preparing to benefit from their expertise in developing the course according to the actual needs of the labor market.

### 72. Infrastructure

The systematic book of winter field crops	.1Required course books
Supporting resources for each course	.2Main references ) sources(
Scientific journals, as well as research, letters and theses of professors in the	a . Recommended books and references ) scientific



same specialty	journals , reports(0000 ,
Location <a href="http://www.google.com">www.google.com</a>	b . Electronic references , websites

## course description form

### Course description

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

Technical Institute / Shatra	73. Educational institution
Department of agricultural mechanization techniques	74. Scientific Department / Center
Soil preparing equipment	75. Course name / code
Blended/ present and e -learning	76. Available forms of attendance
Spring semester / first stage	77. season / year
34hours of theoretical and practical class	78. Number of hours of study ) total(



C - emotional and value goals.

C -1 Enable the student to apply theoretical information in a practical way.

C -2 To develop the patriotic spirit of the student to increase production in quantity and quality.

C - 3 Instilling the concept of community service and the best way to deal with the simple strata of society, the peasants and farmers.

C - 4 Develop professional ethics . Agricultural engineer among students by following the correct professional behavior.

D - Transferred general and rehabilitative skills ) other skills related to employability and personal development.(

D-1

D-2

D-3

D-4

## 82. Course structure

Evaluation method	education method	Unit name / course or topic	Required learning outcomes	hours	the week
Questions and answers mini practical lesson	Lecture and practical lesson	Introduction - Importance of tillage - Properties of good tillage - Positive and negative effects of tillage - Mechanical structure of soil	knowledge and skills	2 theoretical 3 practical	the first
ask questions	Lecture and practical lesson	Basic Plow Equipment - Types of Plows - Down Plow - Types - Areas of Use - Reason for Preferring a Down Plow	knowledge and skills	2 theoretical 3 practical	The second
Listen and	Lecture	Calculate the force	knowledge	2 theoretical	the

ask questions	and practical lesson	acting on the bottom plow	and skills	3 practical	third
Practical exercise, meeting and work groups	Lecture and practical lesson	Disc plow - types - main parts - why a disc plow is preferred - how to turn the soil.	knowledge and skills	2 theoretical 3 practical	the fourth
Practical exercise, meeting and work groups	Lecture and practical lesson	Vertical Disc Plow - Main Parts - Types - Comparison of Disk Plow and Vertical Disk Plow	knowledge and skills	2 theoretical 3 practical	Fifth
Mini Lesson Discussion Practical Exercise and Workgroups	Lecture and practical lesson	Chisel plow - main parts - types - advantages and disadvantages - why the chisel plow is preferred - types of beams - types of weapons.	knowledge and skills	2 theoretical 3 practical	VI
Case study Practical exercise and work groups	Lecture and practical lesson	Rotary - How to move the movement from PTO - Types - Types of weapons - Benefit	knowledge and skills	2 theoretical 3 practical	seventh
Listening and asking practical exercise questions and work groups	Lecture and practical lesson	Sub-soil - its importance - areas of use - main parts - calculate the force that affects it.	knowledge and skills	2 theoretical 3 practical	VIII
Asking questions and listening practical exercise and work	Lecture and practical lesson		knowledge and skills	2 theoretical 3 practical	ninth

groups					
Ask group work questions	Lecture and practical lesson	Secondary tillage equipment - types - areas of use - general purpose	knowledge and skills	2 theoretical 3 practical	The tenth
Mini-lesson work groups	Lecture and practical lesson	Combs - type - areas of use - factors affecting comb penetration.	knowledge and skills	2 theoretical 3 practical	eleventh
Practical exercise and workgroups	Lecture and practical lesson	Disc harrow - Type - Areas of use - Comb teeth - Advantages and disadvantages - Connection and calibration.	knowledge and skills	2 theoretical 3 practical	twelfth
ask questions	Lecture and practical lesson	Levels - their type - areas of use - stairs - type - connection and calibration - maintenance.	knowledge and skills	2 theoretical 3 practical	Thirteenth
Asking practice questions	Lecture and practical lesson	Pulleys - Types - Fields of Use - Excavator - Parts - Connection and Calibration	knowledge and skills	2 theoretical 3 practical	fourteenth
Asking practice questions	Lecture and practical lesson	Installed Equipment - Type - Importance - Use - Benefit			Fifteenth

### 83. course development plan

- Providing the possibility of academic support in organizing field visits.
- Providing the appropriate classroom environment that enables the teacher to diversify teaching strategies.
- Providing information technology in the campus library.
- Hosting experts from outside the institute , or from the work environment for which they are preparing to benefit from their expertise in developing the course according to the actual needs of the labor market.

### 84. Infrastructure

The systematic book of winter field crops	.1Required course books
Supporting resources for each course	.2Main references ) sources(
Scientific journals, as well as research, letters and theses of professors in the same specialty	a . Recommended books and references ) scientific journals , reports(0000 ,
Location <a href="http://www.google.com">www.google.com</a>	b . Electronic references , websites

## **course description form**

### **Course description**

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



B - Skills objectives of the program

B1 - The student is able to solve all kinds of mathematical problems and the applications of functions and determinants.

Teaching and learning methods

Giving scientific and theoretical lectures through displays, powerpoints, slides, microscopes, experiments examining plant samples, using various laboratory equipment and equipment, and a wooden canopy.

94. Course structure					
Evaluation method	education method	Unit name / course or topic	Required learning outcomes	hours	the week
Questions and answers mini practical lesson	Lecture and practical lesson	A brief introduction to mathematics and its usefulness - types of equations and their degrees - algebraic terms - coefficients - exponents.	knowledge and skills	2 theoretical 1 practical	the first
ask questions	Lecture and practical lesson	Differentiation - Concept - Derivatives, Polynomial Functions and Their Derivatives.	knowledge and skills	2 theoretical 1 practical	The second
Listen and ask questions	Lecture and practical lesson	Applications of the above.	knowledge and skills	2 theoretical 1 practical	the third
Practical exercise, meeting and work groups	Lecture and practical lesson	Trigonometric functions - a brief summary - their derivatives - Implicit functions -	knowledge and skills	2 theoretical 1 practical	the fourth



		their derivatives.			
Practical exercise, meeting and work groups	Lecture and practical lesson	Applications about functions.	knowledge and skills	2 theoretical 1 practical	Fifth
Mini Lesson Discussion Practical Exercise and Workgroups	Lecture and practical lesson	Applications of differential - Maximum and minimum values - Plotting regular functions and determining inflection points.	knowledge and skills	2 theoretical 1 practical	VI
Case study Practical exercise and work groups	Lecture and practical lesson	Finding distance, velocity and acceleration - general physical and engineering applications.	knowledge and skills	2 theoretical 1 practical	seventh
Listening and asking practical exercise questions and work groups	Lecture and practical lesson	Integration - its concept - laws and their relationship to calculus - definite and indefinite integration.	knowledge and skills	2 theoretical 1 practical	VIII
Asking questions and listening practical exercise and work groups	Lecture and practical lesson	Applications about integration.	knowledge and skills	2 theoretical 1 practical	ninth

Ask group work questions	Lecture and practical lesson	Finding the area under the curves and under the curve - the approximate area using the Trapezoid and Simpson.	knowledge and skills	2 theoretical 1 practical	The tenth
Mini-lesson work groups	Lecture and practical lesson	Finding the Arc Length of a Curve - Various Applications.	knowledge and skills	2 theoretical 1 practical	eleventh
Practical exercise and workgroups	Lecture and practical lesson	Determinants - their properties - different applications on the topic.	knowledge and skills	2 theoretical 1 practical	twelveth
ask questions	Lecture and practical lesson	Complement applications about determinants.	knowledge and skills	2 theoretical 1 practical	Thirteenth
Asking practice questions	Lecture and practical lesson	Center of gravity of areas - moment of inertia for areas.	knowledge and skills	2 theoretical 1 practical	fourteenth
Asking practice questions	Lecture and practical lesson	Applications about the center of gravity of areas and moment of inertia.			Fifteenth

#### Evaluation methods

- Take daily quick exams Quizzes
- Conducting monthly exams
- Conducting semester and final exams

C - emotional and value goals.  
 C-1 Enable the student to apply theoretical information in a practical way.  
 C -2 To develop the patriotic spirit of the student to increase production in quantity and quality.  
 C - 3 Instilling the concept of community service and the best way to deal with the simple strata of society the peasants and farmers.  
 C - 4 Develop professional ethics . Agricultural engineer among students by following the correct professional behavior.

D - Transferred general and rehabilitative skills ) other skills related to employability and personal development.(  
 D-1  
 D-2  
 D-3  
 D-4

95. course development plan	
<ul style="list-style-type: none"> <li>- Providing the possibility of academic support in organizing field visits.</li> <li>- Providing the appropriate classroom environment that enables the teacher to diversify teaching strategies.</li> <li>- Providing information technology in the campus library.</li> <li>-Hosting experts from outside the institute , or from the work environment for which they are preparing to benefit from their expertise in developing the course according to the actual needs of the labor market.</li> </ul>	
96. Infrastructure	
The systematic book of winter field crops	.1Required course books
Supporting resources for each course	.2Main references ) sources(
Scientific journals, as well as research, letters and theses of professors in the same specialty	a . Recommended books and references ) scientific journals , reports(0000 ,
Location <a href="http://www.google.com">www.google.com</a>	b . Electronic references , websites

## course description form

### Course description

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

Technical Institute / Shatra	97. Educational institution
Department of agricultural mechanization techniques	98. Scientific Department / Center
engineering & industrial drawing	99. Course name / code
Blended/ present and e -learning	100. Available forms of attendance
Spring semester / first stage	101. season / year
34hours of theoretical and practical class	102. Number of hours of study ) total(

1/8/2023	103. The date this description was prepared
104. Course Objectives : Granting the student a diploma in the theoretical and practical aspects to serve the preparation of a graduate of a distinguished level and his commitment to the practical arena.	

105. Course outcomes and methods of teaching, learning and assessment

A- Cognitive goals  
 A1 -Clarifying the importance of engineering drawing - introducing the student to simple engineering operations and training him on Projecting engineering objects and drawing models in AutoCAD.  
 A2 : Introducing the student to the importance of engineering drawing in AutoCAD.

B - Skills objectives of the program  
 B1 - Training the student to perform engineering operations in computer programs.  
 B2: - Enabling the student to draw three-dimensional shapes with high accuracy

Teaching and learning methods

Giving scientific and theoretical lectures through displays, powerpoints, slides, microscopes, experiments in examining plant samples, using various laboratory equipment and equipment, and a wooden canopy.

Evaluation methods

Take daily quick exams Quizzes  
 Conducting monthly exams  
 Conducting semester and final exams

C - emotional and value goals.

C -1 Enable the student to apply theoretical information in a practical way.

C -2 To develop the patriotic spirit of the student to increase production in quantity and quality.

C - 3 Instilling the concept of community service and the best way to deal with the simple strata of society, the peasants and farmers.

C - 4 Develop professional ethics . Agricultural engineer among students by following the correct professional behavior.

D - Transferred general and rehabilitative skills ) other skills related to employability and personal development.(

D-1

D-2

D-3

D-4

#### 106. Course structure

Evaluation method	education method		Required learning outcomes	hours	the week
Questions and answers mini practical lesson	Lecture and practical lesson	<b>Coordinate Entry Methods - Adjustments )Modify (on the drawing - the scale of the drawing - printing and drawing out the drawings.</b>	knowledge and skills	4 practical	the first
ask questions	Lecture and practical lesson	<b>A conscious lines in engineering drawing - change shapes lines - colors and thickness - add text to the drawing - draw lines of all kinds - the line dividing the rectum - the establishment of the pillars - the division of angles - drawing geometric shapes and drawing the dual father returned )2D - ( accurate drawing.</b>	knowledge and skills	4 practical	The second

Listen and ask questions	Lecture and practical lesson	<b>Dividing the board and organizing projections for the projection of geometric bodies - the three levels of projection using construction lines - logical operations (subtraction - unification - intersection) - the three levels of projection.</b>	knowledge and skills	4 practical	the third
Practical exercise, meeting and work groups	Lecture and practical lesson	<b>Setting dimensions using AutoCAD</b>	knowledge and skills	4 practical	the fourth
Practical exercise, meeting and work groups	Lecture and practical lesson	<b>How to draw models (methods of drawing and projection) - drawing models using polar coordinates - creating drawings of three-dimensional objects by (extrusion - changing Thickness. (</b>	knowledge and skills	4 practical	Fifth
Mini Lesson Discussion Practical Exercise and Workgroups	Lecture and practical lesson	<b>Reproducing the third project with the knowledge of two projections - drawing the known plans - reproducing the third project - drawing the stereo in the style of AutoCAD drawing.</b>	knowledge and skills	4 practical	VI
Case study Practical exercise and work groups	Lecture and practical lesson	<b>hash ) Hatch ( of all kinds.</b>	knowledge and skills	4 practical	seventh
Listening and asking practical exercise questions and work groups	Lecture and practical lesson	<b>Creating sectors - an idea of the importance of sectors - the uncut parts - choosing the best cutting level - the order Slice - the order Section</b>	knowledge and skills	4 practical	VIII
Asking questions and listening practical	Lecture and practical lesson	<b>Comprehensive exercises for each funeral study in implementation of the program of a Tokad.</b>	knowledge and skills	4 practical	ninth

exercise and work groups					
Ask group work questions	Lecture and practical lesson	<b>Getting acquainted with the AutoCAD drawing program - the program interface - toolbars - through the two windows of the program A Tocad 2000 - 2008 - choosing units and angles - organizing the paper - defining the sheet- auxiliary commands - precision tools in drawing - the grid - jumping.</b>	knowledge and skills	4 practical	The tenth
Mini-lesson work groups	Lecture and practical lesson	<b>Coordinate Entry Methods - Adjustments )Modify (on the drawing - the scale of the drawing - printing and drawing out the drawings.</b>	knowledge and skills	4 practical	eleventh
Practical exercise and workgroups	Lecture and practical lesson	<b>A conscious lines in engineering drawing - change shapes lines - colors and thickness - add text to the drawing - draw lines of all kinds - the line dividing the rectum - the establishment of the pillars - the division of angles - drawing geometric shapes and drawing the dual father returned )2D - ( accurate drawing.</b>	knowledge and skills	4 practical	twelfth
ask questions	Lecture and practical lesson	<b>Dividing the panel and organizing projections for projecting geometric bodies - the three levels of projection using construction lines.</b>	knowledge and skills	4 practical	Thirteenth
Asking practice questions	Lecture and practical lesson	<b>Logical operations (subtraction - unification - intersection) - the three levels of projection.</b>	knowledge and skills	4 practical	fourteenth
Asking practice questions	Lecture and practical lesson	<b>Setting dimensions using AutoCAD.</b>			Fifteenth



### 107. course development plan

- Providing the possibility of academic support in organizing field visits.
- Providing the appropriate classroom environment that enables the teacher to diversify teaching strategies.
- Providing information technology in the campus library.
- Hosting experts from outside the institute , or from the work environment for which they are preparing to benefit from their expertise in developing the course according to the actual needs of the labor market.

### 108. Infrastructure

The systematic book of winter field crops	.1Required course books
Supporting resources for each course	.2Main references ) sources(
Scientific journals, as well as research, letters and theses of professors in the same specialty	a . Recommended books and references ) scientific journals , reports(0000 ,
Location <a href="http://www.google.com">www.google.com</a>	b . Electronic references , websites

## course description form

### Course description

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

Technical Institute / Shatra	109. Educational institution
Department of agricultural mechanization techniques	110. Scientific Department / Center
Plan and topographic surveying	111. Course name / code

Blended/ present and e -learning	112. Available forms of attendance
Spring semester / first stage	113. season / year
34hours of theoretical and practical class	114. Number of hours of study ) total(
1/8/2023	115. The date this description was prepared
116. Course Objectives : Granting the student a diploma in the theoretical and practical aspects to serve the preparation of a graduate of a distinguished level and his commitment to the practical arena.	

117. Course outcomes and methods of teaching, learning and assessment
<p>A- Cognitive goals</p> <p>A1 : -The student will be able to understand surveying, its divisions, uses, leveling works of all kinds and accompanying works such as contour maps, longitudinal and transverse sections of all kinds, drawing them, calculating their area, and using some angle measuring devices .A2: - Enable the student to use the different measuring devices.</p>
<p>B - Skills objectives of the program</p> <p>B1 - The student will be able to measure horizontal and inclined distances as well as use ground surveying devices to find the levels of points on the surface of the earth and the means of benefiting from them such as drawing longitudinal and transverse sections and calculating their area, as well as identifying the types of maps, drawing scales, drawing contour maps, using the theodolite device and the benefits of using it in agricultural projects.</p>
Teaching and learning methods
Giving scientific and theoretical lectures through displays, powerpoints, slides, microscopes, experiments in examining plant samples, using various laboratory equipment and equipment, and a wooden canopy.

Evaluation methods
Take daily quick exams Quizzes Conducting monthly exams Conducting semester and final exams
C - emotional and value goals. C -1 Enable the student to apply theoretical information in a practical way. C -2 To develop the patriotic spirit of the student to increase production in quantity and quality. C - 3 Instilling the concept of community service and the best way to deal with the simple strata of society, the peasants and farmers. C - 4 Develop professional ethics . Agricultural engineer among students by following the correct professional behavior.

118. Course structure

Evaluation method	education method	Unit name / course or topic	Required learning outcomes	hours	the week
Questions and answers mini practical lesson	Lecture and practical lesson	Definition of Almessahh-divisions - uses of the area topological - settlement-some important definitions in the settlement.	knowledge and skills	2 theoretical 3 practical	the first
ask questions	Lecture and practical lesson	Measurement of horizontal and inclined distances-erecting and dropping columns from and	knowledge and skills	2 theoretical 3 practical	The second

		on the path of the itinerary using the tape			
Listen and ask questions	Lecture and practical lesson	Types of leveling devices - tools used for leveling - hairs method in measuring distances - selecting and checking the machine.	knowledge and skills	2 theoretical 3 practical	the third
Practical exercise, meeting and work groups	Lecture and practical lesson	Levels Calculation Methods - Device Height Method.	knowledge and skills	2 theoretical 3 practical	the fourth
Practical exercise, meeting and work groups	Lecture and practical lesson	receptors) GPS- ( used in GPS and guide lines and measuring horizontal and vertical distances.	knowledge and skills	2 theoretical 3 practical	Fifth
Mini Lesson Discussion Practical Exercise and Workgroups	Lecture and practical lesson	Types of maps - Scale of drawing - Scale of longitudinal drawing - Lattice drawing.	knowledge and skills	2 theoretical 3 practical	VI
Case study Practical exercise and work groups	Lecture and practical lesson	Map contour-characteristics-their uses - the period contour and the factors that determine the selection.	knowledge and skills	2 theoretical 3 practical	seventh
Listening and asking practical exercise questions and work groups	Lecture and practical lesson	Drawing the contour map by the arithmetic method.	knowledge and skills	2 theoretical 3 practical	VIII
Asking questions and listening practical exercise and work groups	Lecture and practical lesson	Ways to enlarge and reduce maps and materialize.	knowledge and skills	2 theoretical 3 practical	ninth
Ask group work questions	Lecture and practical lesson	Longitudinal sections their uses and drawing.	knowledge and skills	2 theoretical 3 practical	The tenth

Mini-lesson work groups	Lecture and practical lesson	Approximate method for calculating the cross-sectional area of cut and backfill.	knowledge and skills	2 theoretical 3 practical	eleventh
Practical exercise and workgroups	Lecture and practical lesson	Cross sections their uses and drawing.	knowledge and skills	2 theoretical 3 practical	twelfth
ask questions	Lecture and practical lesson	External leaflet computational Altersemeh in the cross sections of space account.	knowledge and skills	2 theoretical 3 practical	Thirteenth
Asking practice questions	Lecture and practical lesson	Calculation of the cross-sectional area of irrigation canals and sewers.	knowledge and skills	2 theoretical 3 practical	fourteenth
Test	Lecture and practical lesson	Device Altheodolaa c kinds - uses in measuring angles and directions.			Fifteenth

119. Infrastructure	
The systematic book of winter field crops	.1Required course books
Supporting resources for each course	.2Main references ) sources(
Scientific journals, as well as research, letters and theses of professors in the same specialty	a . Recommended books and references ) scientific journals , reports(0000 ,
Location <a href="http://www.google.com">www.google.com</a>	b . Electronic references , websites

120. course development plan
<ul style="list-style-type: none"> <li>- Providing the possibility of academic support in organizing field visits.</li> <li>- Providing the appropriate classroom environment that enables the teacher to diversify teaching strategies.</li> <li>- Providing information technology in the campus library.</li> <li>-Hosting experts from outside the institute , or from the work environment for which they are preparing to benefit from their expertise in developing the course</li> </ul>

according to the actual needs of the labor market.

## course description form

### Course description

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

Technical Institute / Shatra	121. Educational institution
Department of agricultural mechanization techniques	122. Scientific Department / Center
English language 1	123. Course name / code
Blended/ present and e -learning	124. Available forms of attendance
Spring semester / first stage	125. season / year

34hours of theoretical and practical class	126. Number of hours of study ) total(
1/8/2023	127. The date this description was prepared
128. Course Objectives : Granting the student a diploma in the theoretical and practical aspects to serve the preparation of a graduate of a distinguished level and his commitment to the practical arena.	

129. Course outcomes and methods of teaching, learning and assessment

A- Cognitive goals

- A1 : The student is able to understand and know the English language
- A2: - To enable the student to know the rules of the English language.

B - Skills objectives of the program

- B1 - The student should be able to speak the English language.
- B2 - The applicant should be able to understand a native English speaker

Teaching and learning methods

Giving scientific and theoretical lectures through displays, powerpoints, slides, microscopes, experiments in examining plant samples, using various laboratory equipment and equipment, and a wooden canopy.

Evaluation methods

- Take daily quick exams Quizzes
- Conducting monthly exams
- Conducting semester and final exams

C - emotional and value goals.  
 C -1 Enable the student to apply theoretical information in a practical way.  
 C -2 To develop the patriotic spirit of the student to increase production in quantity and quality.  
 C - 3 Instilling the concept of community service and the best way to deal with the simple strata of society, the peasants and farmers.  
 C - 4 Develop professional ethics . Agricultural engineer among students by following the correct professional behavior.

### 130. Course structure

Evaluation method	education method	Unit name / course or topic	Required learning outcomes	hours	the week
Questions and answers mini practical lesson	Lecture and practical lesson	Theoretical Syllabus	knowledge and skills	2 theoretical	the first
ask questions	Lecture and practical lesson	Whats your name , what is this , translation	knowledge and skills	2 theoretical	The second
Listen and ask questions	Lecture and practical lesson	Countries , pronunciation , cities and contries	knowledge and skills	2 theoretical	the third
Practical exercise, meeting and work groups	Lecture and practical lesson	Jobs , negatives , address	knowledge and skills	2 theoretical	the fourth
Practical exercise, meeting and	Lecture and practical lesson	The family , listening , possessive ,	knowledge and skills	2 theoretical	Fifth



work groups		possessive adjectives			
Mini Lesson Discussion Practical Exercise and Workgroups	Lecture and practical lesson	Sports, food and drink, present simple, reading, listening	knowledge and skills	2 theoretical	VI
Case study Practical exercise and work groups	Lecture and practical lesson	The time, present simple, question and negative, translation, listening, writing	knowledge and skills	2 theoretical	seventh
Listening and asking practical exercise questions and work groups	Lecture and practical lesson	Object pronouns , questions words , why and because , listening , reading	knowledge and skills	2 theoretical	VIII
Asking questions and listening practical exercise and work groups	Lecture and practical lesson	Rooms and furniture , preposition , reading and writing , translation	knowledge and skills	2 theoretical	ninth
Ask group work questions	Lecture and practical lesson	Saying years, writing, past simple, irregular verbs, translation	knowledge and skills	2 theoretical	The tenth
Mini-lesson work groups	Lecture and practical lesson	Past time, regular verbs, irregular verbs, question and negative	knowledge and skills	2 theoretical	eleventh
Practical exercise and workgroups	Lecture and practical lesson	Activities, listening, pronunciation, requests and offers	knowledge and skills	2 theoretical	twelveth
ask questions	Lecture and practical	Want and would like , pronunciation	knowledge	2 theoretical	Thirteenth

	lesson	, translation , reading	and skills		
Asking practice questions	Lecture and practical lesson	Colors , present continuous , translation , reading	knowledge and skills	2 theoretical	fourteenth
Test	Lecture and practical lesson	Present continuous for future , reading and listening, translation			Fifteenth

### 131. Infrastructure

The systematic book of winter field crops	.1Required course books
Supporting resources for each course	.2Main references ) sources(
Scientific journals, as well as research, letters and theses of professors in the same specialty	a . Recommended books and references ) scientific journals , reports(0000 ,
Location <a href="http://www.google.com">www.google.com</a>	b . Electronic references , websites

### 132. course development plan

- Providing the possibility of academic support in organizing field visits.
- Providing the appropriate classroom environment that enables the teacher to diversify teaching strategies.
- Providing information technology in the campus library.
- Hosting experts from outside the institute , or from the work environment for which they are preparing to benefit from their expertise in developing the course according to the actual needs of the labor market.

