Ministry of Higher Education and Scientific Research

Scientific Supervision and Scientific Evaluation Apparatus

Directorate of Quality Assurance and Academic Accreditation

Accreditation Department

Academic Program and Course Description Guide

2024

Introduction:

The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program.

The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments.

This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 3/2906 on 3/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work.

In this regard, we can only emphasize the importance of writing an academic programs and course description to ensure the proper functioning of the educational process.

Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

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

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

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve the learning outcomes of the program.

Academic Program Description Form

University Name: Southern Technical University.
Faculty/Institute: Basrah Technical Institute
Scientific Department: Building and Construction Techniques
Academic or Professional Program Name: Civil Technologies.
Final Certificate Name: Technical Diploma
Academic System: Semester
Description Preparation Date: 16/10/2024
File Completion Date:

Signature:
Head of Department Name:
Dr. Hanadi Abdulridha Lateef
Date: 17/10/2024

Signature:
Scientific Associate Name:
Dr. Abdul Nasser Abdul Jabbar Abbood
Date: 17/10/2024

The file is checked by:
Department of Quality Assurance and University Performance
Director of the Quality Assurance and University Performance Department:
Anwar Abood
Date: 17-10-2024
Signature:

Approval of the Dean

1. Program Vision

"Preparing a technical educational program that keeps pace with scientific developments in construction and building, to be a distinguishing mark in terms of the quality of outputs necessary for the success of technical staff in performing their roles in project execution."

2. Program Mission

"Working to prepare a specialized technical team in the field of construction, equipped with knowledge and ethics that align with the spirit of the times and the advancements in the construction sector, while considering the requirements of the labor market."

3. Program Objectives

1. "Preparing specialized and qualified technical personnel to serve the community through participation in:

- Preparing and reading engineering plans.
- Calculating quantities and measurements for civil works.
- Conducting laboratory and field tests.
- Executing various civil works while considering the use of modern and advanced materials and construction methods to maximize benefits for the labor market.
- Analyzing problems when they arise, discussing them, and finding effective solutions by leveraging knowledge reserves.

2. Focusing on the educational and ethical aspects of students, instilling a spirit of dedication, tolerance, commitment, and service to the nation. - Paying attention to intellectual and cultural development by being open to the experiences of other countries in the field of construction and building."

4. **Program Accreditation**
There are no.

5. **Other external influences**
"Field visits to work projects within the geographical area, taking into account the selection of projects that incorporate modern construction methods in terms of building techniques, structural elements, and materials used."

6. **Program Structure**

Program Structure	**Number of Courses**	**Credit hours**	**Percentage**	**Reviews***
Institution Requirements	16 First stage 21 Second stage	55 First stage 66 Second stage	26 specialized 7.44 help 3.30 general	graduation project annual syllabus
Summer Training	**2 months for first stage**			
Other				

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

7. **Program Description**

Year/Level	**Course Code**	**Course Name**	**Credit Hours**

2023-2024			theoretical	Practical
First stage **1st course**		Construction Materials/1	2	2
		Engineering Mechanics/1	2	1
		Surveying (1)/1	2	2
		Concrete Technology/1	1	2
		Mathematics	3	-
		Computer Application /1	-	2
		Engineering Drawing/1	-	6
		Workshop	-	3
		Human Rights	2	-
Sum.			12	18

Year/Level	Course Code	Course Name	Credit Hours	
2023-2024			**theoretical**	**Practical**
First stage **2nd course**		Construction Materials/2	2	2
		Engineering Mechanics/2	2	1
		Surveying (1)/2	2	2
		Concrete Technology/2	1	2
		Mathematics/2	3	-
		Engineering Drawing AutoCAD	-	6
		Technical English Language	2	-
Sum.			12	13

Year/Level	Course Code	Course Name	Credit Hours	
2023-2024			**theoretical**	**Practical**
Second stage **1st course**		Concrete Technology/1	2	2
		Technology of Construction/1	-	4
		Soil Mechanics	2	2
		Civil Drawing	-	6
		Surveying2/1	1	2
		Building and Fabricated Building	2	-
		Technical English Language/2	2	-
		Construction Equipment's	2	-

		Quantity Surveying	1	2
		Project	-	2
		Crimes of the Ba'ath regime in Iraq	2	-
Sum.			14	20

Year/Level	Course Code	Course Name	Credit Hours	
2023-2024			**theoretical**	**Practical**
Second stage 2nd course		Concrete Technology/2	2	2
		Technology of Construction/2	-	4
		Soil Mechanics/2	2	2
		Civil Drawing/2	-	6
		Surveying2/2	1	2
		Building and Fabricated Building	2	-
		Construction Equipment's/2	2	-
		Quantity Surveying/2	1	2
		Project	-	2
		Computer Application /2	-	2
			10	22

8. Expected learning outcomes of the program

Knowledge

1. Enabling students to acquire knowledge, understanding, principles, theories, and fundamentals in civil engineering disciplines.
2. Enabling students to understand advanced modern scientific and practical topics in civil technical disciplines.

3. Introducing students to the most important software used in the field of civil engineering disciplines.

4. Enabling students to understand the basics of laboratory equipment used for testing and evaluating construction materials and the quality of completed buildings, and how to operate this equipment and perform tests on it.

Skills

1. The ability to read and prepare structural engineering drawings.
2. The ability to perform laboratory experiments according to standard technical specifications.
3. The ability to write and formulate technical engineering reports on test results and scientific experiments, and the ability to derive conclusions and their impacts from the tests.
4. Developing students' abilities to participate in problem analysis and find appropriate solutions.
5. Enhancing communication skills so that the graduate can act as a link between the worker and the advanced engineering staff.

Ethics

1. Developing a spirit of cooperation and teamwork.
2. Emphasizing professional ethics and appropriate methods of interaction.

9. Teaching and Learning Strategies

1. Theoretical lectures.

2. Scientific discussions.
3. Working in groups.
4. Practical lectures in engineering laboratories.
5. Scientific seminars and presentations of the latest developments in the field by students.

6. Scientific field trips to real work sites to observe key issues and applications in civil engineering disciplines within actual work environments.
7. Graduation projects for final-year students.

10.Evaluation methods

1. Monthly or semester written exams.
2. Quizzes.
3. Writing scientific and practical reports.
4. Writing reports on the most important engineering observations from field trips.
5. Scientific seminars.
6. Homework assignments.
7. Committees for discussing graduation projects for final-year students.

11.Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Lecturer	Civil Engineering	structures			3	1
Assistant Lecturer	Civil Engineering	structures			3	

Assistant Lecturer	Civil Engineering	Soil mechanics			1	
Assistant Lecturer	Civil Engineering	Infrastructures			1	
Assistant Lecturer	Civil Engineering	Soil mechanics and foundation engineering			1	
Assistant Lecturer	English language and literature	poetry				1
Assistant Lecturer	Biology	Environmental remediation			1	
Assistant Lecturer	Mathematics	General				1
Lecturer	Public law	Criminal law				1
Sum.					10	4

Professional Development
Mentoring new faculty members
1. introducing new faculty members to the department's proceedings and its program, and involving them in the department's scientific committees.

2. Keeping track of the implementation of the department's program by clarifying updates.

Professional development of faculty members

1. Conducting a survey of student opinions at the end of each semester on various topics for personal development.
2. Conducting a survey of faculty opinions at the end of each semester on the best ways to enhance curricula and teaching methods.
3. Organizing developmental and training courses to deliver the latest global information regarding teaching and curricula.
4. Coordinating with the Quality Assurance Department at the institute and university to monitor the implementation of the academic program in the department and ways to improve it.

12.**Acceptance Criterion**

First : admission requirements for the institute

1. Adopting admission criteria for students in accordance with the regulations of the Ministry of Higher Education and Scientific Research (central admission).
2. Successfully passing any special test or personal interview deemed necessary by the institute or university council.
3. Being medically fit for the chosen specialization.

Second: admission requirements for the scientific department

1. Choosing the student's preferences from multiple options ranked by priority.
2. The admission average in high school.
3. The average for the course of the department the student wishes to study.
4. The capacity of the scientific department.

13.**The most important sources of information about the program**

14.Program Development Plan
1. Updating the curricula to align with advancements in the field of specialization. 2. Adopting modern specialized software. 3. Continuously updating laboratories to match the development of equipment, methods, and tools in the field of construction.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A 4	B1	B2	B 3	B4	C1	C2	C3	C4
2023-2024 First stage		Construction Materials	Basic	\	\	\	\	\	\	\	\	\	\	\	\
		Engineering Mechanics	Basic	\	\	\	\	\	\	\	\	\	\	\	\
		Surveying (1)	Basic	\	\	\	\	\	\	\	\	\	\	\	\
		Technical English Language	Help	\	\	\		\	\	\		\	\	\	
		Mathematics	Help	\	\	\		\	\	\		\	\	\	

		Computer Application (1)	Help	\	\	\		\	\	\		\	\	\	
		Engineering Drawing	Basic	\	\	\	\	\	\	\	\	\	\	\	\
		Concrete Technology/1	Basic	\	\	\	\	\	\	\	\	\	\	\	\
		workshop	Help												
		Human rights	general												
2023-2024 Second stage		Concrete Technology/2	Basic	\	\	\	\	\	\	\	\	\	\	\	\
		Technology of Construction/2	Basic	\	\	\	\	\	\	\	\	\	\	\	\
		Soil Mechanics/2	Basic	\	\	\	\	\	\	\	\	\	\	\	\
		Civil Drawing/2	Basic	\	\	\	\	\	\	\	\	\	\	\	\

		Surveying2/2	Basic	\	\	\	\	\	\	\	\	\	\	\	\
		Building and Fabricated Building	Basic	\	\	\	\	\	\	\	\	\	\	\	\
		Construction Equipment's/2	Basic	\	\	\	\	\	\	\	\	\	\	\	\
		Quantity Surveying/2	Basic	\	\	\	\	\	\	\	\	\	\	\	\
		Project	Basic	\	\	\	\	\	\	\	\	\	\	\	\
		English 2	Help	\	\	\		\	\	\		\	\	\	
		Baath regime crimes	Help	\	\	\		\	\	\		\	\	\	

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

Course Description Form

1. Course Name:
Construction Materials
2. Course Code:
3. Semester / Year:
Semester(first)
4. Description Preparation Date:
14/10/2024
5. Available Attendance Forms:
In-Person
6. Number of Credit Hours (Total) / Number of Units (Total)
(2 theoretical + 2 practical) by (4) hours per week = 120 total hours
7. Course administrator's name (mention all, if more than one name)
Name: Mohammed Khalil Ismail Email: mohammedalharb93@gmail.com
8. Course Objectives

Course Objectives	Introducing the student to the properties of the construction materials and themethods of their production. Introducing the student to modern alternatives that currently exist and modermethods of production. Qualifying the student to carry out standard tests to find out the extent to the construction materials conform to the specifications and determine the possibility of using them in construction, which ensures strength, safety and economy.

9. Teaching and Learning Strategies

Strategy	1. Cognitive Strategies. 2. Active Learning Strategies. 3. Collaborative Learning Strategies. 4. Discussion Strategy.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	2T + 2P	1.Providing the student with comprehensive knowledge of the types of building materials, their properties, production methods and uses. 2- The ability to classify materials, conduct standard laboratory tests, and determine their suitability and compatibility with the purpose for which they are used.	Theoretically General description of properties Physics Standard specifications for building materials and their uses in buildings and practically get to know. On the laboratory and its basic equipment and scales	Theoretical and practical lectures	Discussion, Quick Quiz, Homework andLab Report
Second	2T + 2P		Clay bricks and their manufacturing methods Practical examinations Brick density, weight Qualitative		
Third	2T + 2P		Properties, uses and specifications of clay bricks Practical testsBrick-Absorption,1/2 hour, 24hour, walk		
Fourth	2T +		Clay brick tests Practical examinations Brick-resistance		

	2P		Compression tests Brick- soluble salts		
Fifth	2T + 2P		Limestone bricks Glass bricks Properties and manufacturing methods practically Glass brick and brick tests Limestone density Absorption and resistance Compression		
Sixth	2T + 2P		Concrete blocks (properties and method of manufacture with an explanation of the difference between them) and practical tests Concrete blocks and bricks concrete, density and Absorption,		
Seventh	2T + 2P		Thermos tone, its properties and methods of manufacture and practically Tests Thermos tone, density, absorption, resistance and Compression		

Eighth	2T + 2P		A visit to the bricks factory		
Ninth	2T + 2P		Building stone - classification and types.		
Tenth	2T + 2P		Uses of building stone according to its types		
Eleventh	2T + 2P		Binding materials and their types with tests. Binding materials that don't resist Moisture plaster, cast standard, hardening time		
Twelfth	2T + 2P		Moisture resistant materials (Provisions Cement mortar - Nora) Nora How to make it and its properties with check Tensile strength		
Thirteen	2T + 2P		Moisture resistant binders (Gypsum)Properties and manufacture with power Endurance		
			Gypsum		

fourteenth	2T + 2P		products - types, properties, and secondary ceiling materials and their types with check smoothness of gypsum and plaster products		
fifteenth	2T + 2P		Application materials for tiles and tiling and its types.		
Second semester					
First	2T + 2P	Providing the student with comprehensive knowledge of the types of building materials, their properties, production methods and uses. 2- The ability to classify materials, conduct standard laboratory tests, and determine their suitability and compatibility with the purpose for which they are used.	Methods of manufacture - Method of application – Joints with tests standard for concrete slabs and sidewalks, absorption	Theoretical and practical lectures	Discussion, Quick Quiz, Homework andLab Report
Second	2T + 2P		Types of moisture-proof materials and their causes Use with examination pressure and refractive standards for the cashier Concrete slabs		
Third	2T + 2P		High humidity materials, their types, manufacturing methods and uses with specifications standard for testing of moisture-proof materials		
			Semi-elastic and elastic moisture		

Fourth	2T + 2P		barriers, their types, uses, manufacturing methods, and liquid barrier materials for humidity.		
Fifth	2T + 2P		Epoxy definition, properties, types and uses with standard Tests for Binding Materials (Epoxy)		
Sixth	2T + 2P		Wood -His origin its types and methods of use with check vertical and parallel stress of wood fibers		
Seventh	2T + 2P		Wood drying methods and wood defects with check wood splitting and bending test		
Eighth	2T + 2P		Minerals (Materials ferrous and non-ferrous) and their uses in Buildings.		
Ninth	2T + 2P		Iron, methods of making it, its types and uses with check tension for iron		
Tenth	2T + 2P		Thermal insulation materials with specifications standard for testing thermal insulation materials		
			Sound insulation materials with		

Eleventh	2T + 2P		specifications standard for testing soundproof materials		
Twelfth	2T + 2P		Dyes with specifications Standard for testing materials for dyes		
Thirteen	2T + 2P		Glass with tests Standard for glass		
fourteenth	2T + 2P		Asphalt Properties of Asphalt Materials with check Softness in a way penetration Asphalt_ cement and check softness in a way ring and Ball Test		
fifteenth	2T + 2P		Types of asphalt and its uses in construction works with check Obedience for asphalt Ductility Test and check degree of ignition Flash Point And check Degree of homogeneity by method Spot Test		

11.Course Evaluation
50 marks (20 theoretical + 20 practical + 10 year's work). 50 marks for the final exam (40 theoretical + 10 practical)
12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Building Construction / Artin Levin and Zuhair Sako. Construction materials / Jalal Bashir and Saeed Abdel-Ali. Unified Building Code for Parts One and Two / Imad Darwish
Recommended books and references (scientific journals, reports...)	Reviewing many scientific journals issued by various Iraqi universities, in addition to visits to scientific libraries and the institute's library.
Electronic References, Websites	

1. Course Name:
Engineering Mechanics
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
14/10/2024
5. Available Attendance Forms:
In-Person
6. Number of Credit Hours (Total) / Number of Units (Total)
90 hours per year (2 theoretical + 1 practical) applied over 30 weeks)/6Units (3Ur per semester)
7. Course administrator's name (mention all, if more than one name)
Name: Mohammed Khalil Ismail Email: mohammedalharb93@gmail.com
8. Course Objectives

Course Objectives	Teaching the student how to analyze structures and find the resultant forces, stresses and strains generated in their parts as a result of applying external loads and the relationship of this to the properties of the

	materials that make up the structural member, and designing engineering structures that meet safety and economy requirements.

9. Teaching and Learning Strategies

Strategy	1. Cognitive Strategies. 2. Active Learning Strategies. 3. Collaborative Learning Strategies. 4. Discussion Strategy.

10. Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
First	3	Engineering Mechanics	Definition of mechanics, fo and trigonometric ratios	Theoretical+ practical	Test + practical
Second	3	Engineering Mechanics	Analysis of forces	Theoretical+ practical	Test + practical
hird	3	Engineering Mechanics	Triangle force and parallelogram	Theoretical+ practical	Test + practical
Fourth	3	Engineering Mechanics	Moment of forces	Theoretical+ practical	Test + practical
Fifth	3	Engineering Mechanics	Couples	Theoretical+ practical	Test + practical
Sixth	3	Engineering Mechanics	Resultant of concurrent force	Theoretical+ practical	Test + practical
Seventh	3	Engineering Mechanics	Resultant of non-concurrent forces	Theoretical +practical	Test + practical
Eighth	3	Engineering Mechanics	Distributed loads	Theoretical+ practical	Test + practical
Ninth	3	Engineering Mechanics	Equilibrium in concurrent forces	Theoretical +practical	Test + practical
Tenth	3	Engineering Mechanics	Equilibrium in non-concurred forces	Theoretical +practical	Test + practical
Eleventh	3	Engineering Mechanics	Types of beams and supports	Theoretical+ practical	Test + practical
Twelfth	3	Engineering Mechanics	Analysis of trusses by method of joints	Theoretical +practical	Test + practical
Thirteen	3	Engineering Mechanics	Analysis of trusses by method of sections	Theoretical +practical	Test + practical

fourteenth	3	Engineering Mechanics	Friction, friction theory	Theoretical +practical	Test + practical
fifteenth	3	Engineering Mechanics	Laws of friction, types of friction, applications	Theoretical practical	Test + practical
Second semester					
First	3	Engineering Mechanics	Introduction about strength of materials, Centroids of simple shapes	Theoretical practical	Test + practical
Second	3	Engineering Mechanics	Centroids of complex shapes	Theoretical practical	Test + practical
Third	3	Engineering Mechanics	Moment of inertia for the simple shapes	Theoretical practical	Test + practical
Fourth	3	Engineering Mechanics	Moment of inertia for the complex shapes	Theoretical practical	Test + practical
Fifth	3	Engineering Mechanics	Strength of materials, definite of stress, types of stresses factor of safety	Theoretical practical	Test + practical
Sixth	3	Engineering Mechanics	Stresses applications	Theoretical practical	Test + practical
Seventh	3	Engineering Mechanics	hook 's law, relation between stress and strain	Theoretical practical	Test + practical
Eighth	3	Engineering Mechanics	Lateral strain, poison 's ratio, applications of relation between stress and strain	Theoretical practical	Test + practical
Ninth	3	Engineering Mechanics	Bending stress for beams Shear force and bending moment diagrams	Theoretical practical	Test + practical
Tenth	3	Engineering Mechanics	applications of Bending stress for beams Shear force and bending moment diagrams	Theoretical +practical	Test + practical
Eleventh	3	Engineering Mechanics	Bending moment for beams	Theoretical practical	Test + practical

Twelfth	3	Engineering Mechanics	Applications of Bending moment for beams	Theoretical practical	Test + practical
Thirteen	3	Engineering Mechanics	Shear stress and applications	Theoretical practical	Test + practical
fourteenth	3	Engineering Mechanics	Beams which making from two materials and their applications	Theoretical practical	Test + practical
fifteenth	3	Engineering Mechanics	Beams which making from two materials and their applications	Theoretical practical	Test + practical

11.Course Evaluation	
Distribution as follows:40 degree for striving (30 theoretical + 10 practical year).60 marks for final exam	
12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	Engineering Mechanics - HKD Engineering Mechanics - Singer Maryam Engineering Mechanics - Hubler
Recommended books and references (scientific journals, reports...)	Reviewing many scientific journals issued by various Iraqi universities, in addition to visits to scientific libraries and the institute's library.
Electronic References, Websites	

1. Course Name:
The principle of surveying
2. Course Code:
3.Semester / Year:
Semester
4. Description Preparation Date:
14/10/2024

5. Available Attendance Forms:

In-Person

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

(2 theoretical + 2 practical) by (4) hours per week = 60 total hours for each semester, 4 units

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

Name: Dr. Marwan adil hussan

Email: marwan.adil@stu.edu.iq

8. Course Objectives

Course Objectives	• Introducing students to the basics of surveyingbuilding and knowing how to drop or survey aspecific area • How to settle and amend land • Knowing the properties of horizontal and verticalangles. • Introduce the student to the fax. Introducing the student to modern surveyingdevices and methods of working on them

9. Teaching and Learning Strategies

Strategy	1- Asking questions and inquiries that are distinguished by depth and accuracy. 2- Directing the student towards understanding the cause and reason. 3- 3- Developing a digital sense of expression. 4- Brainstorming

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	2T + 2P	1.Gaining basic knowledge in surveying and getting to know the different surveying devices and tools. 2- The ability carry out fi monitoring wo produce	Definition of surveying - its fields - its divisions - its uses - units of measurem	Theoretical & practical	Discussion, Quick Quiz, Homework and Lab Report
Second	2T + 2P		Measurement of horizontal distances on plane land - Measurement of horizontal distance on land of irregular slope.	Theoretical & practical	
	2T +		Measuring horizontal distances on sloping terrain (regular	Theoretical & practical	

Third	2P	implement ma	sloping)	
Fourth	2T + 2P	and conduct surveying calculations necessary for work.	Set up and shoot down columns - overcome obstacles which abstruct the measurement of horizontal distance	Theoretical & practical
Fifth	2T + 2P		Tape survey	Theoretical & practical
Sixth	2T + 2P		Plane table - its parts - methods of lifting the Plane table (radiation method)	Theoretical & practical
Seventh	2T + 2P		Front cross lift method, rotation method (locking error and how to correct it) Advantages and disadvantages of Planetable survey	Theoretical & practical
Eighth	2T + 2P		levelling - Definitions Related to It – Purposes	Theoretical & practical
Ninth	2T + 2P		Calculating the levels of points using H.I	Theoretical & practical
Tenth	2T + 2P		Calculating the levels of points using the method of rising and falling	Theoretical & practical
Eleventh	2T + 2P		Double leveling - the effect of the Earth's sphericality and optical refractions on the leveling work	Theoretical & practical
Twelfth	2T + 2P		Inverted levelling Mutual levelling	Theoretical & practical
	2T + 2P		Sources of errors in leveling work - accuracy - allowable error	Theoretical & practical

Thirteen					
fourteenth	2T + 2P		profiles	Theoretical & practical	
fifteenth	2T + 2P		Cross-sections - Finding the levels of points of a cross-section - Drawing the cross-section	Theoretical & practical	
Second semester					
First	2T + 2P	1.Gaining basic knowledge in surveying and getting to know the different surveying devices and tools. 2- The ability to carry out field monitoring work, produce and implement maps, and conduct the surveying calculations necessary for the work.	Grade line Calculation of the slope of the Grade line Finding the elevations of the points of the Grade line if theslope is known	Theoretical & practical	Discussion, Quick Quiz, Homework and Lab Report
Second	2T + 2P		Calculation of land areas and cross sections	Theoretical & practical	
Third	2T + 2P		Calculating areas using a planometer	Theoretical & practical	
Fourth	2T + 2P		Calculating the volumes of earthen quantities for cut and fill	Theoretical & practical	
Fifth	2T + 2P		Checking and adjusting the leveling device - balancing the leveling lines (leveling balancing).	Theoretical & practical	
Sixth	2T		Contour lines - their properties - Contour period - Factorson which the contour period depends - Determination of	Theoretical & practical	

	+ 2P		contour lines (Direct Method)	
Seventh	2T + 2P		Methods for determining contour lines (indirect methods), sectional method, set point method, square method	Theoretical & practical
Eighth	2T + 2P		drawing contour lines	Theoretical & practical
Ninth	2T + 2P		Slopes - Calculation of volumes for tanks - Drawing of sections from contour lines	Theoretical & practical
Tenth	2T + 2P		Direction - Circular direction- bearing	Theoretical & practical
Eleventh	2T + 2P		Surveying using a compass	Theoretical & practical
Twelfth	2T + 2P		Curves - Horizontal Curves - Elements of a Simple Circular Curve	Theoretical & practical
Thirteen	2T + 2P		Simple Circular Curve Design - Simple Circular Curve Drawing	Theoretical & practical
fourteenth	2T + 2P		Vertical Curves - Vertical Curve Design	Theoretical & practical
fifteenth	2T + 2P		General Review	Theoretical & practical

11. Course Evaluation

50 marks (20 theoretical + 20 practical + 10 year's work). 50 marks for the final exam (40 theoretical + 10 practical)

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	Surveying Engineering / Abbas Zidane Khalaf Principles of Surveying Engineering / Juma Daoud Engineering and cadastral survey / Ziad Abdul Jabbar Al-Bakr Surveying engineering/Moffit FH

Recommended books and references (scientific journals, reports...)	Iraqi Journal of Civil Engineering Egyptian Survey Magazine
Electronic References, Websites	Many websites for surveying and geomatics engineering

1. Course Name:
Concrete Materials
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
14/10/2024
5. Available Attendance Forms:
In-Person
6. Number of Credit Hours (Total) / Number of Units (Total)
(1 theoretical + 2 practical) by (3) hours per week = 45 total hours for one semester (3 units)
7. Course administrator's name (mention all, if more than one name)
Name: Eng. Ali Uday Hilal Email: odaya764@gmail.com
8. Course Objectives

Course Objectives	Introducing the student to the materials that make up concrete and mastering the properties of these physical, mechanical and chemical materials and their impact on concrete, and the practical part includes the necessary tests for these materials.

9. Teaching and Learning Strategies

Strategy	1. Cognitive strategies 2. .Active learning strategies. 3. .Cooperative learning strategies. 4. Discussion strategy

10. Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
First	1T + 2P	Introducing student to materials involv in the work concrete, properties a methods manufacture	Theoretically a general description of the physical properties and standard specifications of concrete materials and their uses in buildings and practically identify the laboratory and its	Theoretical & practical	Discussion, Quick Quiz, Homework and Lab Report

			basic equipment and balances		
Second	1T + 2P		Types of cement, its properties, methods of manufacture, and knowing how to examine the texture of ordinary white and Portland cement	Theoretical & practical	
Third	1T + 2P		Properties, uses and specifications of cement and practically knowing the initial and final cohesion time of Portland cement and fast hardening and comparing it with the standard	Theoretical & practical	
Fourth	1T + 2P		Tests for the tensile and compressive strength of cement mortar and how to obtain high resistance using additives	Theoretical & practical	
Fifth	1T + 2P		Cement softness and how it affects the rehydration process of cement paste and how to obtain smoothness within standard specifications	Theoretical & practical	
Sixth	1T + 2P		Definition of cement stability, the reason for cement expansion, expansion limits,	Theoretical & practical	

			and methods of measurement using Les Chatelet and Autoclave methods		
Seventh	1T + 2P		Different methods of sampling standard aggregates of coarse and fine aggregates and distinguish between methods of coarse aggregate and methods of fine aggregate	Theoretical & practical	
Eighth	1T + 2P		How to calculate the humidity of coarse and fine aggregates and its effect on the concrete mixture	Theoretical & practical	
Ninth	1T + 2P		lFor stacked and non-stacked density and how to conduct tests	Theoretical & practical	
Tenth	1T + 2P		Inflation in sand and how to calculate and its effect on concrete and measure the percentage of abrasion corrosion of coarse aggregate and calculate the percentage of extinction	Theoretical & practical	

Eleventh	1T + 2P		Gradient with coarse aggregate and the method of arranging standard sieves and knowing how to calculate the gradient according to the standard specification	Theoretical & practical	
Twelfth	1T + 2P		Gradient with fine aggregate and the method of arranging standard sieves and knowing how to calculate the gradient according to the standard specification	Theoretical & practical	
Thirteen	1T + 2P		Specific weight (relative density) and absorption of coarse aggregate and the extent of its effect on the concrete mix and methods of examination	Theoretical & practical	
fourteenth	1T + 2P		Specific weight (relative density) of fine aggregate and absorption Definition and effect on the concrete mix and methods of examination and comparison with the specification	Theoretical & practical	
fifteenth	1T + 2P		Suspended materials and clay materials for coarse aggregate and their impact on the cohesion of	Theoretical & practical	

			the concrete mixture, their harms and methods of treatment and examination of the percentage of salts of fine aggregates (sulfur)		
Second semester					
First	1T + 2P	Introducing the student to the materials involved in the work of concrete, its properties and methods of manufacture	Definition of abrasion ratio of coarse aggregate, extinction rate, method of examination and calculation using Los Angeles instrument	Theoretical & practical	Discussion, Quick Quiz, Homework andLab Report
Second	1T + 2P		\Organic materials and their effect on fine aggregates, their harms and treatment methods	Theoretical & practical	
Third	1T + 2P		Definition of light aggregates and method of calculating gradient	Theoretical & practical	
Fourth	1T + 2P		Definition of light aggregates and method of calculating gradient.	Theoretical & practical	
Fifth	1T + 2P		Porosity and absorption of light aggregates	Theoretical & practical	
Sixth	1T + 2P		Know the durability of different types of aggregates and compare them with standard specifications	Theoretical & practical	
Seventh	1T + 2P		Mixing water and the presence of plankton, clay	Theoretical & practical	

			and sulfur materials, chlorides and organic materials whose effect on the concrete mix is known		
Eighth	1T + 2P		The presence of plankton, clay materials, salts and chlorides and their effect on concrete mixing water	Theoretical & practical	
Ninth	1T + 2P		Physical tests of different types of fibers used in fiber concrete with a focus on tensile rectifier	Theoretical & practical	
Tenth	1T + 2P		Fly ash (carbon and salts) and its effect on concrete	Theoretical & practical	
Eleventh	1T + 2P		Types of concrete additives and measurement of density and specific weight	Theoretical & practical	
Twelfth	1T + 2P		Softness of solid additives and viscosity of liquid additives	Theoretical & practical	
Thirteen	1T + 2P		Percentage of salts and sediments of solid and liquid additives	Theoretical & practical	
fourteenth	1T + 2P		Effect of Delayed Additives on Initial and Final Cohesion Time of Cement	Theoretical & practical	
	1T + 2P		Effect of accelerated additives on the initial and final	Theoretical & practical	

fifteenth			cohesion time of cement		

11. Course Evaluation	
50 marks (20 theoretical + 20 practical + 10 year's work). 50 marks for the final exam (40 theoretical + 10 practical)	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	
Main references (sources)	Properties of concrete/Neville Concrete technology/
Recommended books and references (scientific journals, reports...)	Reviewing many scientific journals issued by various Iraqi universities, in addition to visits to scientific libraries and the institute's library.
Electronic References, Websites	

1. Course Name:	
Mathematics	
2. Course Code:	
3. Semester / Year:	
Semester	
4. Description Preparation Date:	
14/10/2024	
5. Available Attendance Forms:	
In-Person	
6. Number of Credit Hours (Total) / Number of Units (Total)	
(3 theoretical hours per week)= 45 total hours for each semester (3units)	
7. Course administrator's name (mention all, if more than one name)	
Name: Asmaa Hamdan eanid Email:Asmaahammdan93@gmail .com	
8. Course Objectives	
Course Objectives	Developing the student's skill in employing the principles of mathematics in various engineering applications and developing their skills to benefit from them in other engineering lessons.
9. Teaching and Learning Strategies	
Strategy	1. Cognitive strategies. 2. Active learning strategies. 3. Cooperative learning strategies. 4. Discussion strategy.

10. Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
First	3	The student learns about the uses of	Matrices, determinants, and their properties	Lecture theoretical	Discussion and solving

Second	3	mathematics in engineering applications. 2- Develop intellectual, logi and analytical sk to benefit from th in various aspects engineering studie	determinants Applicationson, ,by using Cramer's rule ,Liner of equation .Solve force analysis equations	Lecture theoretical	exercises, Quiz, Homework
Third	3		vector ,vector and scalar quantities ,analysis the vectors ,The Vectors . arithmetic operations of vectors in space ,algebra	Lecture theoretical	
Fourth	3		Standard and Directional vector scale ,orthogonal vector unit .Calculation of torque applications, workvector application, Multiplication.	Lecture theoretical	
Fifth	3		Logarithmic functions ,Hyperbolic Trigonometric functions ,Functions.	Lecture theoretical	
Sixth	3		the hyperbolic function Exponential function, hyperbolic function its ,properties.	Lecture theoretical	
Seventh	3		Limits application ,purpose of algebraic and trigonomet functions Limits.	Lecture theoretical	
	3		Sequence.	Lecture theoretical	

Eighth					
Ninth	3		Derivatives of algebraic functions chain base , Derivatives.	Lecture theoretical	
Tenth	3		Curvilinear functions, the derived scalar function with higher orders.	Lecture theoretical	
Eleventh	3		Derivative of logarithmic functions , Derivative of trigonometric functions.		
Twelfth			Function exponential's, Hyperbolic Function.	Lecture theoretical	
Thirteen	3		Derives Application acceleration and. the speed Equation, Tangent	Lecture theoretical	
fourteenth	3		Exponential and Logarithmic	Lecture theoretical	
fifteenth	3		Draw functions ,General physical and engineering applications	Lecture theoretical	
Second semester					
First	3	The student learns about the uses of mathematics in engineering applications. 2- Developing intellectual, logical and analytical skills	Integration and Indefinite integral	Lecture theoretical	
Second	3		Integration of Logarithmic functions	Lecture theoretical	
Third	3		integration of Function exponential's	Lecture theoretical	

Fourth	3	to benefit from them in various aspects of engineering studies.	Definite integral, Application of definite integrals, Area under the curve, Area . between two curves	Lecture theoretical	
Fifth	3		.Rotational volumes, arc lengths	Lecture theoretical	
Sixth	3		Physics and engineering applications (work, torque, momentum, moment of .inertia)	Lecture theoretical	
Seventh	3		General methods of integration, including substitution and division	Lecture theoretical	
Eighth	3		Use partial, exponential and logarithmic fractions.	Lecture theoretical	
Ninth	3		Numerical methods of integration, trapezoidal rule rule (calculating the volume earthy quantities and the ar of longitudinal sections	Lecture theoretical	
Tenth	3		Solving discrete, homogeneo and linear differential equations with their .variou applications within the field specialization	Lecture theoretical	
Eleventh	3		Find the value of the highest lowest point of a vertical Curve	Lecture theoretical	

Twelfth	3		Complex numbers, addition, subtraction, multiplication, division	Lecture theoretical	
Thirteen	3		Polar formula, conversionof polar formula to algebraic and vice versa, powers and roots, representation of roots bydrawing	Lecture theoretical	
fourteenth	3		Statistical processes, frequency distributions, histogram, frequency curve, .mean, range, standard deviation, variance and relative applications	Lecture theoretical	
fifteenth	3		processes, frequency distributions, histogram, frequency curve, .mean, range, standard deviation, variance and relative applications	ecture theoretical	

11. Course Evaluation	
(30Theoretical + 10 practical years).60Final Exam Score	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Institute library for additional resources for curriculum
Main references (sources)	Thomas' Calculus – G., B., Thomas, M., D., Weir, J. Hass
Recommended books and references (scientific journals, reports...)	Reviewing many scientific journals issued by various Iraqi universities, in addition to visits to

	scientific libraries and the institute's library.
Electronic References, Websites	Website deals with mathematic

1. Course Name:

Engineering Drawing

2. Course Code:

3. Semester / Year:

Semester

4. Description Preparation Date:

14/10/2024

5. Available Attendance Forms:

Attendance is mandatory

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

6 hour in week

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

Name: Abdul Jalil Jaber Hussein
Email: albsrawyjlyl97@gmail.com

8. Course Objectives

Teaching the student the principles of elementary engineering drawing and computer drawingprograms efficiently and quickly to enable him to express his ideas through him.

Qualifying the student to draw and read engineering maps with knowledge of architectural structural terms that are used in maps.

9. Teaching and Learning Strategies

Strategy	1. Cognitive strategies. 2. Active learning strategies. 3. Cooperative learning strategies. 4. Discussion strategy.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	6	Engineering drawing	Basics of engineering drawin tools used, installation of the panel, types of lines	Practical drawing	Homework + Exam

Second	6	Engineering drawing	Writing in Kufic Arabic geometric calligraphy and writing English letters and numbers in geometric calligraphy	Practical drawing	Homework + Exam
Third	6	Engineering drawing	Engineering processes, halving a straight segment, halving angle, connecting a straight with a circle with an arc, connecting two lines with an arc, drawing Equilateral triangle	Practical drawing	Homework + Exam
Fourth	6	Engineering drawing	Engineering operations Drawing a pentagon and hexagon shape in more than one way and drawing a seven sided shape	Practical drawing	Homework + Exam
Fifth	6	Engineering drawing	Straight tangent drawing of two circles from the inside and outside, arc tangent to the inside and outside circles	Practical drawing	Homework + Exam
Sixth	6	Engineering drawing	Ellipse	Practical drawing	Homework + Exam
Seventh	6	Engineering drawing	Apply drawing geometric shapes using basic geometric processes.	Practical drawing	Homework + Exam
Eighth	6	Engineering drawing	Principles of projection, method of placing dimensions on drawing, exercises on projection.	Practical drawing	Homework + Exam
Ninth	6	Engineering drawing	Applications of axial projection on simple objects. Applications of Axial Projection on Objects with Cylindrical Protrusions and Cavities	Practical drawing	Homework + Exam
Tenth	6	Engineering drawing	Drawing the isometric perspective	Practical drawing	Homework + Exam
Eleventh	6	Engineering drawing	Oval drawing with isometric perspective	Practical drawing	Homework + Exam
Twelfth	6	Engineering drawing	Exercises on the isometric perspective	Practical drawing	Homework + Exam

Thirteen	6	Engineering drawing	Finding the Missing Projection with Isometric Perspective Drawing	Practical drawing	Homework + Exam
fourteenth	6	Engineering drawing	Exercises , finding the missing projection with isometric perspective drawing	Practical drawing	Homework + Exam
fifteenth	6	Engineering drawing	Explanation of passages and exercises about syllables	Practical drawing	Homework + Exam
Second semester					
First	6	Engineering drawing	Continue to take applications in the theory of axial projection such as shapes containing inclined surfaces and shapes containing cavities or cylindrical projections.	Practical drawing	Homework +
Second	6	Engineering drawing	Learn about the types of fonts and how to obtain and use them in AutoCAD by placing them in multiple layers, different colors, and different weight line thickness	Practical drawing	Homework + Exam
Third	6	Engineering drawing	Drawing basic geometric shapes, triangle, pentagon, hexagons and polygons in general, ellipse Connecting two lines p a circle sector, connecting two circles with an arc by instructing (circle Ttr) Connecting a line with a circle with an arc in the same way	Practical drawing	Homework + Exam
Fourth	6	Engineering drawing	Drawing composite geometric shapes and mechanical parts (applications to engineering processes)	Practical drawing	Homework + Exam
Fifth	6	Engineering drawing	Drawing projections of stereoscopic shapes and placing dimensions on them using multiple layers (layers)	Practical drawing	Homework + Exam
Sixth	6	Engineering drawing	Draw projections of stereo shapes using different font colors and different thickness by changing properties	Practical drawing	Homework + Exam

Seventh	6	Engineering drawing	Find the missing projection and continue drawing the projections	Practical drawing	Homework + Exam
Eighth	6	Engineering drawing	Putting additions to the drawings (gradient & hatch), how to add additional inscriptions to the program from external sources	Practical drawing	Homework + Exam
Ninth	6	Engineering drawing	Drawing the stereoscopic shape in a way (snap Isometric) and drawing sections in the same way and the method of repeating shapes using the command (Rectangular array & array Polar)	Practical drawing	Homework + Exam
Tenth	6	Engineering drawing	Drawing an integrated panel containing the types of drawings (D2) and (D3) and	Practical drawing	Homework + Exam
Eleventh	6	Engineering drawing	Singling out geometric shapes (cube, prism, pyramid)	Practical drawing	Homework + Exam
Twelfth	6	Engineering drawing	Singling out geometric shapes (cube, prism, pyramid)	Practical drawing	Homework + Exam
Thirteen	6	Engineering drawing	Singling out geometric shapes (truncated pyramid, cone).	Practical drawing	Homework + Exam
fourteenth	6	Engineering drawing	Dealing with the scale of the drawing and the method of printing using the command (plot).	Practical drawing	Homework + Exam
fifteenth	6	Engineering drawing	Method of exporting drawing from formula	Practical drawing	Homework + Exam

11. Course Evaluation
Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports ..... etc

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	The book of engineering drawing by the author Abdul Rasoul Al-Khafaf
Main references (sources)	George Omura The Complete Guide 2007 LT AutoCAD Aldar
Recommended books and references (scientific journals, reports...)	Arab Science, Beirut Lebanon 2

Electronic References, Websites	All journals specialized in engineering drawing

1. Course Name:
workshops
2. Course Code:
3. Semester / Year:
The second semester
4. Description Preparation Date:
14/10/2024
5. Available Attendance Forms:
Mandatory attendance
6. Number of Credit Hours (Total) / Number of Units (Total):
3 hours* 15 weeks = 45 hours Faculty
7. Course administrator's name (mention all, if more than one name)
Name: Karim Mohammed Hassan Email: Kareem.alhamrany@stu.edu.iq
8. Course Objectives

Course Objectives	**Acquiring the manual skill in using hand tools, measuring tools, and operating machinesnecessary to prepare the student as a technician Specialization in building and construction**
9. Teaching and Learning Strategies	
Strategy	1-Explanation and clarification through lectures2 - Graduation Projects 3- Scientific visits 4- reports

10. Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
First	3	Explanation clarification throlectures	Measurement processes and toused (tape, vernier, micromete	Conduct experiments	Reports
Second	3	Explanation and clarificathrough lectures	Practical applications for carpentry works for civil constructions,	Conduct experiments	Reports

			including:		
Third	3	Explanation and clarificathrough lectures	Work: Wooden doors (pressing doors, packing doors).	Scientific visit	Reports
Fourth	3	Explanation and clarificathrough lectures	Work: wooden molds.	Scientific visit	Reports
Fifth	3	Explanation and clarificathrough lectures	Applications on reinforcing st making roof, bridge and colum reinforcement (cutting iron, bending iron, and welding thepieces).	Conduct experiments	Reports
Sixth	3	Explanation and clarificathrough lectures	Applications on reinforcing st making roof, bridge and colum reinforcement (cutting iron, bending iron, and welding the pieces).	Conduct experiments	Reports
Seventh	3	Explanation and clarificathrough lectures	Exercises on cutting and joinistructural steel using rivets, screws, and welding.	Conduct experiments	Reports
Eighth	3	Explanation and clarification throughlectures	Exercises on cutting and joinistructural steel using rivets, screws, and welding.	Conduct experiments	Reports
Ninth	3	Explanation and clarification throughlectures	Stone and plaster works: cuttisawing, leveling and perforati	Conduct experiments	Reports
Tenth	3	Explanation and clarification throughlectures	Stone and plaster works: cuttisawing, leveling and perforati	Conduct experiments	Reports
Eleventh	3	Explanation and clarification through lectures	Connecting pipes to water installations, (u of mechanization), typ of accessories for pipe and methods of connecting them.	Conduct experiments	Reports

			installations Sanitary sewers, connection methods		
Twelfth	3	Explanation and clarification through lectures	Connecting pipes to water installations, (u of mechanization), typ of parts for pipes and methods of connectin them, installations Sanitary sewers, connection methods	Scientific visit	Reports
Thirteen	3	Explanation and clarification throughlectures	Connecting pipes to water installations, (use of mechanization), types of partspipes and methods of connecti them, installations	Scientific visit	Reports
fourteenth	3	Explanation and clarification throughlectures	Different types of pipes with tparts, an exercise in making anetwork of water and sewerag foundations for a residential house. Sanitary sewers and connection methods.	Conduct experiments	Reports
fifteenth	3	Explanation and clarification throughlectures	Different types of pipes with tparts, an exercise in making anetwork of water and sewerag foundations for a residential house. Sanitary sewers and connection methods.	reports	Reports

11. Course Evaluation	
1. The first month exam (10%Theory) 2. The second month exam (10%Theory) 3. Acts of the course (10%) is taken into account attendance andparticipation. 4. Final exam (70%T) first-round and second round.	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Building construction book - buildings and factory constructi
Main references (sources)	Building construction book - buildings and factory constructi

1. Course Name:

Human Rights

2. Course Code:

3. Semester / Year:

Semester

4. Description Preparation Date:

14/10/2024

5. Available Attendance Forms: Attendance is mandatory

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

2 hour in week

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

Name: Abbas Barism Habib
Email: basrem9@gmail.com

8. Course Objectives

Introducing the student to human rights, their goals and development in different eras and the role of international organizations and public opinion in respecting and protecting human rights

9. Teaching and Learning Strategies

Strategy	Lecture Discussion and dialogue

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understand the lesson	Human rights, definition, objectives)	Lecture	Exam And the discussion and dialogue
2	2	Understand the lesson	The roots and development human rights in human history: human rights in antiquity and the Middle Ages	Lecture	Exam And the discussion and dialogue
3	2	Understand the lesson	Human rights in civilization Ancient and especially the civilization of Mesopotamia	Lecture	Exam And the discussion and dialogue
4	2	Understand the lesson	Human rights in heavenly la with a focus on human right in Islam	Lecture	Exam And the discussion and dialogue

5	2	Understand the lesson	Human rights in the Middle Ages: Human rights in doctrines - schools and basic theories Human rights companies and their advertising	Lecture	Exam And the discussion and dialogue
6	2	Understand the lesson	Human rights in contempor and modern history International recognition of human rights since World War I and the League/Unite Nations	Lecture	Exam And the discussion and dialogue
7	6	Understand the lesson	Regional recognition of hun rights: European Conventio on Human Rights 1950 American Convention on th Rights of Human Being, 1969African Charter For Human Rights, 1981 Charter Arab for Human Rights.	Lecture	Exam And the discussion and dialogue
8	6	Understand the lesson	NGOs and Rights Human Rights Committee (ICRC)red , ai , Human Rights Watch (HRW)	Lecture	Exam And the discussion and dialogue
9	2	Understand the lesson	National Human Rights Organizations	Lecture	Exam And the discussion and dialogue
10	2	Understand the lesson	Human rights in Iraqi constitutions between theory and reality.	Lecture	Exam And the discussion and dialogue
11+12	2	Understand the lesson	Stuck between human rights and public freedoms 1- in the Universal Declaration of Human Rights 2- in regional charters and national constitutions).	Lecture	Exam And the discussion and dialogue
13	2	Understand the lesson	Essential human rights and rights Collective human.	Lecture	Exam And the discussion and dialogue
14	2	Understand the lesson	Economic human rights Social, cultural, civil human rights and politics	Lecture	Exam And the discussion and dialogue
15	2	Understand the Lesson	Modern Human Rights: Fac in Development, Right to clean environment, Right t solidarity, Right to religion	Lecture	Exam And the discussion and dialogue
11. Course Evaluation					

(30 theoretical exams + 10 works per year) .60Final exam grade (theoretical)

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	1- Human Rights (Development - Content - Protection) Prof. Dr. Riyad Aziz Hadi 2- Human rights, democracy and public freedoms. Dr. Maher Sabry Kazem Reviewing many scientific journals issued by various Iraqi universities, in addition to visits to scientific libraries and the institute's library.
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1. Course Name:
Computer
2. Course Code:
3. Semester / Year:
One Semester
4. Description Preparation Date:
14/10/2024
5. Available Attendance Forms: Attendance is mandatory
Theoretical and practical lectures
6. Number of Credit Hours (Total) / Number of Units (Total):
2 hour in week
7. Course administrator's name (mention all, if more than one name)
Name: Ahlam Aziz Jaafer Email: Ahlamalmansorr@gmail .com
8. Course Objectives
Introducing the student to the computer with an idea about its prospects and use in different fields and about the principles of programming and providing him with the skill of using the computer to implement programs prepared in advance for application in his field of specialization.
9. Teaching and Learning Strategies

Strategy	1. Cognitive strategies. 2. Active learning strategies. 3. Cooperative learning strategies. 4. Discussion strategy.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	The student learns about computers, their components and operating systems	Introduction to computers: their generations, their physical components Hardware and Software (System software and application software).	Lecture Lecture Lecture Lecture	Exam And the discussion and dialogue
2	2		Operating systemWindows10Windows system concept, its features and basic requirements, operating the system, components of the main desktop screenDesktopIcon conceptIconHow to deal with mouse activities, importance and components of the taskbarTask BarBenefit fromStartTo enter programs, the concept of loaded tasks, exit the system and turn off the computer (Shut Down) . *The concept of the window for any program and identifying its main components, dealing with desktop icons such as: (My Documents; My Computer; Recycle Bin) . *Getting to know (My Computer) In terms of disks, folders and files, and how to deal with formatting floppy disks and copying folders and files, benefiting from cutting and pasting and knowing the properties of disks, folders and files, dealing with the Recycle Bin and how to		
3	2				
4	2				
5	2				
6	2				
7	2				

			delete files and retrieve them through what the Recycle Bin provides in this aspect Benefit from control panel programs (Control Panel) like an icon (Mouse) and icon (Display) How to change the desktop background, control the screen saver, change the appearance of the desktop background, control the screen saver, change the appearance of the window menus and their colors, icon (Add; Remove; Program) In adding and deleting programs. * Benefit from the option (Run) in executing programs properly as well as converting to the operating system signal (Ms-Dos) And deal with his orders. * Use entertainment programs such as (Window Media Player) in movie playback. * Benefit from additional programs (Accessories) like a calculatorCalculator) . * Dealing with the drawing program (Paint) In creating, saving and retrieving drawings through the commands it provides. * Dealing with the notes window (Notepad; WordPad) In writing, saving, retrieving, printing, changing the printing		

			style and formatting of texts. * Find out how to get help (Help) and its various methods.		
8	2		Introduction to AutoCAD (2000) and explanation of the program interface. Screen settings (Shape; Grid ;Limits) . Drawing list (Draw) . List of revisions (Modify) . existing (Object Shape) . Layers (Layers) . Dimensions. Writing. Store files, import files from other programs and export them. a job (Blocks) And import parts from other programs. Draw a simple house plan. Draw a section of a simple building. Printing, copying and outputting files to printers and plotters.		
9	2				
10	2				
11+12	2				
13	2				
14	2				
15	2				

11. Course Evaluation
(40 exam +10Year's work). 50 marks for the final exam (practical)

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Required textbooks (methodology if any)
Main references (sources)	Main References (Sources)
Recommended books and references (scientific journals, reports...)	Recommended supporting books and references (scientific journals, reports, etc.)
Electronic References, Websites	Electronic references, websites

1. Course Name:
English language 1
2. Course Code:
3. Semester / Year:
One semester
4. Description Preparation Date:
2024/10/14
5. Available Attendance Forms:
In-person
6. Number of Credit Hours (Total) / Number of Units (Total):
2 theory * 15 weeks = 30 hours Faculty
7. Course administrator's name (mention all, if more than one name)
Name: Mahmoud Abdel- Ilah Abdel-Moneim Email: muhmood.abid@stu.edu.iq
8. Course Objectives

Course Objectives	**Improving students' skills in English language, developing their reading, writing and listen** **abilities, and enable them to write scientific reports in English language**
9. Teaching and Learning Strategies	
Strategy	1-Preparation and implementation of research and projects by students within the vocabul section of space technology materials and the introduction of the applications of mathematics presented in the annual student conferences. 2-Develop and upgrade of the vocabulary of mathematics to keep up with development in ordeachieve personal development to the level of the students.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Explanation and clarificathrough lectures	Introductions, am/ are/ is. Whthis in English?	Lecture presentation	Exam
2	2	Explanation and clarificathrough lectures	Numbers 1 – 10. Plurals.Good morning!	Lecture presentation	Exam

3	2	Explanation and clarificathrough lectures	Countries, am/are/is. Hername's. She's from. Questions. Adjectives good/awful. Numbers 11 – 30	Lecture presentation	Exam
4	2	Explanation and clarificathrough lectures	Jobs, is/ isn't. Questions & negatives. Vocabulary revisioSocial expression (1).	Lecture presentation	Exam
5	2	Explanation and clarificathrough lectures	Passive's, my/our/her. The family, has/have. Vocabularyrevision. The alphabet	Lecture presentation	Exam
6	2	Explanation and clarificathrough lectures	Sports/food/drink. Present simple-1/you/they. Language nationalities. How much is it?	Lecture presentation	Exam
7	2	Explanation and clarificathrough lectures	The time. Present Simple-he/s Prepositions in/at/on. Words t go together. Days of the week	Lecture presentation	Exam
8	2	Explanation and clarification throughlectures	Questions. Pronouns me/him.Possessive adjectives my/his/this/that. Adjectives happy/miserable. Can I..?	Lecture presentation	Exam
9	2	Explanation and clarification throughlectures	Questions. Pronouns me/him.Possessive adjectives my/his/this/that. Adjectives happy/miserable. Can I..?	Lecture presentation	Exam
10	2	Explanation and clarification throughlectures	Saying years, was/were. PastSimple-irregular verbs have/do/go. Months & dates.	Lecture presentation	Exam
11	2	Explanation and clarification throughlectures	Past Simple-regular verbs. Questions & negatives. Makin conversation. Sport & leisure activities. Going sightseeing	Lecture presentation	Exam
12	2	Explanation and clarification throughlectures	Can/can't. Adverbs-very well/at all. Requests & offers.	Lecture presentation	Exam

			Adjective + noun. Everydayproblems		
13	2	Explanation and clarification throughlectures	Some/any. I'd like a../I'd like t Offering things Like & wouldlike. Food	Lecture presentation	Exam
14	2	Explanation and clarification throughlectures	Colours & clothes. Present Continuous. Present Simple o Continuous?. Opposite verbs- leave-arrive. What's the matte	Lecture presentation	Exam
15	2	Explanation and clarification through lectures	Future plans. Grammar revisio Vocabulary revision. Form filling. Social expressions (2)	Lecture presentation	Exam

11. Course Evaluation
30 theoretical exams + 10 works per year) .60Final exam grade (theoretical)

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Required textbooks (curricular books, if any)* Newheadway Plus, Pre-Intermediate Student's b by John & Liz Soars Press. Oxford *Newheadway Plus, Beginner Workbook by John & Soars Press. Oxford

1. Course Name:
Construction Techniques
2. Course Code:
3. Semester / Year:
2024
4. Description Preparation Date:
14/10/2024
5. Available Attendance Forms:

mandatory Attendance

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

120 hours (4 hours per week)

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

Name: Abdul aziz Mohammad Abdul latif

Email: amohammed@lectuers.stu.edu.iq

8. Course Objectives

Course Objectives	1. Linking the field of construction and construction with the field of information technologies. 2. Standard properties of building materials. 3. The use of heat and sound insulation materials. 4. Different types of walls and building materials.

9. Teaching and Learning Strategies

Strategy	1- Directing distinctive questions and inquiries in depth and accuracy.2- Directing the student towards understanding the cause and cause. 3- Developing the digital sense of expression. 4- Brainstorming.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	The student understandsthe lesson	Planning the foundations, usingsurveying devices	practical	.Quick questions
2	4	The student understandsthe lesson	excavations, and attributing thesides of the pits	practical	Weeky reports
3	4	The student understandsthe lesson	Working and arming the foundation for a wall or a pillar	practical	Discussing problems and solutions
4	4	The student understandsthe Lesson	Presentation of a scientific film of the work of the pillars, the t and how they work and the machiused for that	practical	.Quick questions
6-5	4	The student understandsThe lesson	Building works with bricks,English strapping, German strapping, other types of strapping	practical	Weeky reports
7	4	The student understandsthe Lesson	Building blocks (block, thermostone).	practical	Discussing problems and solutions

9-8	4	The student understandsthe Lesson	Wooden mold work, trainingmaking a wooden mold for a column, bridge, stairs and roofs.	practical	.Quick questions
11	4	The student understandsthe Lesson	Regular and reinforced concrete pouring and the use ofmanual banging, as well as training in mechanical batting.	practical	Weeky reports
11	4	The student understandsthe lesson	A scientific visit to the site of thework of a wooden mold and pouring concrete.	practical	Discussing problems and solutions
13-12	4	The student understandsthe lesson	Reinforcing work, reinforcing sthe correct way to use it, making reinforcing models for a column, roof and bridge.	practical	.Quick questions
14	4	The student understandsthe lesson	Iron works, iron structura sect and aluminum sections and w they are not available show scientific film for that.	practical	Weeky reports
15	4	The student understands The lesson	Tiles works	practical	Discussing problems and solutions
Second semester					
1-2	4	The student understands The lesson	Moisture repellent works, trainin the use of some moisture retar materials and how to use them optimally, such as asphaltbituminous materials and according to what is available.	practical	.Quick questions
3	4	The student understandsthe lesson	Presentation of a scientific film on thermal insula materials: their types, how to use them their benefits	practical	Weekly reports
4	4	The student understandsthe lesson	Plaster work, whitewashing a wall using plaster.	practical	Discussing problems and solutions
5-6	4	The student understandsthe lesson	Ficus and prose works: 1. Using cement mortar. 2. Using cement mortar - Nora.	practical	.Quick questions
7	4	The student understandsthe lesson	Packing work tiles	practical	Weekl y reports

8	4	The student understands the lesson	Wall covering works, wall covering using Al-Hallan	practical	Discussing problems and solutions
9	4	The student understands the lesson	Secondary ceilings,	practical	.Quick question
10	4	The student understands the lesson	Painting work (training on how to use it	practical	Weekly reports
11	4	The student understands the lesson	Sanitary works: Training the student on how to lay sewage pipes, clean water pipes, and the locations of basins, bathtubs, latrines, and others.	practical	Discussing problems and solutions
12	4	The student understands the lesson	Electrical works: training the student to make the spurs and the correct termination around them and how to install some electric lamps (establishing a light point and a blackout).	practical	.Quick questions
13	4	The student understands the lesson	Mechanical works: ventilation duct work (ie, refrigerated duct work)	practical	Weekly reports
14-15	4	The student understands the lesson	Road works work as a foundation under the foundation for a road (as a model)	practical	Discussing problems and solutions

11. Course Evaluation	
Continuous assessment Final grade out of 100	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Building Construction
Main references (sources)	Hand book of building construction 2006
Recommended books and references (scientific journals, reports...)	Road Works Techniques Materials of Construction
Electronic References, Websites	

1. Course Name:
soil mechanics
2. Course Code:

3. Semester / Year:
Semester/ second stage
4. Description Preparation Date:
14/10/2024
5. Available Attendance Forms:
mandatory
6. Number of Credit Hours (Total) / Number of Units (Total):
(120) hours of study at the rate of (4) hours per week (8 units)
7. Course administrator's name (mention all, if more than one name)
Name: Abeer Sabry Bashara Email: abeermaj@stu.edu.iq
8. Course Objectives

Course Objectives	At the end of the academic year, the student will be able to 1. Soil classification 2. conducting the necessary tests for soil (field or laboratory) 3. Knowing the relationship of soil with the facilities that will be built on 4. Knowing the types of foundations and ways to determine the appropriate foundation 5 Estimating the risk of choosing the type of foundation

9. Teaching and Learning Strategies
Use the available programs to view the lectures And Use videos for clarificationThe discussion Ask questions Exams

1. Course Name:
Soil mechanics
2. Course Code:

3. Semester / Year:	
Semester/ second stage	
4. Description Preparation Date:	
14/10/2024	
5. Available Attendance Forms:	
In-Person	
6. Number of Credit Hours (Total) / Number of Units (Total)	
(2 theoretical + 2 practical) by (4) hours per week = 60 total hours in semester (8 units)	
7. Course administrator's name (mention all, if more than one name)	
Name: Abeer Sabri Bshara Email: abeermaj@stu.edu.iq	
8. Course Objectives	
Course Objectives	Knowledge of soil properties and the impact of structures built on it .
9. Teaching and Learning Strategies	
Strategy	1. The discussion 2. Ask questions 3. Exams

10. Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
1	4	The stude knowledge of components of and types of rocks	Definition of soil , type of rocks	Presentation ppt videos	Discussing and asking questions
2	4	The student's knowledge Of soil properties	Soil components, physical properties of soil (water content, specific gravity, ..)	Presentation	Discussing
	4		Soil granular		

3		The student's know how to find the granular size of the soil	analysis , (sieve method)	Presentation ppt and videos	Discussing asking questions
4	4	The student's know how to find the granular size of the soil	Soil granular analysis , (hydrometer method)	Presentation ppt and videos	Discussing asking questions
5	4	The student's knowledge of the properties plasticity	Soil plasticity properties (liquid limit and plastic limit)	Presentation ppt and videos	Discussing asking questions
6	4	The student's knows how soil is classified	Soil classification using (UCS)	Presentation ppt and videos	Discussing asking questions
7	4				
8	4	The student's knowledge of soil permeability measurement	Soil permeability (permeability of coarse soil)	Presentation ppt and videos	Discussing asking questions
9	4	The student's knowledge of soil permeability measurement	Soil permeability (permeability of fine soil)	Presentation ppt and videos	Discussing asking questions
10	4	The Student knows how stresses calculated	Types of stresses in soil , (normal stress and effective stress)	Presentation ppt and videos	Discussing asking questions
11	4	Student's knowledge the lateral soil pressure is calculated	Soil lateral pressure , (lateral earth pressure)	Presentation ppt and videos	Discussing asking questions

12	4	The student's knowledge how to improve properties of soil	Improve properties of soil	Presentation ppt and videos	Discussing asking questions
13	4	The student's knows how the soil is compacted	Types of compaction , (lab. And field)	Presentation ppt and videos	Discussing asking questions
14	4	The student's knows the methods of improve the soil	Methods of improving soil properties and stabilization by cement	Presentation ppt and videos	Discussing asking questions
15	4				
Second semester					
1		The Student's knowledge of modern methods of soil improving	Modern methods of soil improving and stabilization (reinforcement of soil)	Presentation ppt and videos	Discussing asking questions
2					
3		Student's knowledge how to find CBR	California Bering ratio	Presentation ppt and videos	Discussing asking questions
4		Student's knowledge how to find the settlement in soil	Consolidation in soil	Presentation ppt and videos	Discussing asking questions
5					
6		The student's knowledge of swelling and collapse in soil	Swelling and collapse in soil	Presentation ppt and videos	Discussing asking questions
7		The student's knowledge of the shear strength	Shear strength	Presentation ppt and videos	Discussing asking questions

		of the soil	of the soil		
8		The student's knowledge of the shear strength of the soil	Direct shear (Shear test)	Presentation ppt and videos	Discussing asking questions
9		The student's knowledge of the shear strength of the soil	Triaxial shear Triaxial compression test	Presentation ppt and videos	Discussing asking questions
10					
11		The student's knowledge how field shear tests	Field shear test	Presentation ppt and videos	Discussing asking questions
12		The Student's knowledge of types of foundations	Types of foundations	Presentation ppt and videos	Discussing asking questions
13		Student's knows to investigations of soil	Investigation of soil	Presentation ppt and videos	Discussing asking questions
14					
15		The student's knowledge of the shear strength of the soil	Direct shear (Shear test)	Presentation ppt and videos	Discussing asking questions

11. Course Evaluation

1- Mid Exam (20 theoretical + 20 practical)
2- Evaluation 10
Final exam 50%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Soil mechanics and earthworks
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	Other sources on the internet

1. Course Name:	
Civil Drawing	
2. Course Code:	
3. Semester / Year:	
semester	
4. Description Preparation Date:	
14/10/2024	
5. Available Attendance Forms: Attendance is mandatory	
In-person	
6. Number of Credit Hours (Total) / Number of Units (Total)	
(6 practical)* 30 weeks = 180 hours Faculty	
7. Course administrator's name (mention all, if more than one name)	
Name: Fatima Mohammed Reda Abdul Hussein Email:falmomen892@gmail.com	
8. Course Objectives	
Course Objectives	1) Introducing the student to how to prepare and produce structural, sanitary, architectural and executive maps.
	2) Introducing the student to how to understand executive and construction maps.
	3) Introducing the student to modern methods of drawing.
	4) students acquire the skills to resolve issues.
9. Teaching and Learning Strategies	

Strategy	• Theoretical lectures. • Using and touching modern electronic programs. • Scientific films. • Systematic training

10. Course Structure					
Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Assessment Method**
1	1T+5P	The student understands thelesson	Introduction to structural drawing, architectural and idiomatic symbols, lines in maps, drawing models for building and construction materials, drawing scale, executive maps and types of brick and block construction.	Theoreti cal Lecture + training	Discussion and training
2	1T+5P	The student understands thelesson	Drawing the horizontal plan of a residential house or small building and the first floor plan and determining the longitudinal and transverse sections and facades.	Theoreti cal Lecture + training	Discussion and training
3	1T+5P	The student understands thelesson	Drawing longitudinal and transverse sections and detailed sections of the finishing layers for floors, ceilings and flatness.	Theoreti cal Lecture + training	Discussion and training

4	1T+5P	The student understands thelesson	An introduction to the sanitary drawing and structures of water and sanitary installations and sanitary furniture, and then drawing the network of water and sanitary installations for the previous horizontal plans.	Theoreti cal Lecture + training	Discussion and training
5	1T+5P	The student understands thelesson	Drawing the structural details of theinspection basins and linking them with the health establishments network.	Theoreti cal Lecture + training	Discussion and training
6	1T+5P	The student understands thelesson	Drawing the structural details of theseptic tanks and storage (sink) annexed to the house plan.	Theoreti cal Lecture + training	Discussion and training
7	1T+5P	The student understands thelesson	Introduction to concrete and construction principles. Concrete bearing with different types of stresses, necessary reinforcing steeland its types, and drawing symbolsused in maps and construction details.	Theoreti cal Lecture + training	Discussion and training
8	1T+5P	The student understands thelesson	Concrete slabs of all kinds, the transfer of loads through them and the necessary reinforcement for them, with drawing the structural details of the one-way solid slabs.	Theoreti cal Lecture + training	Discussion and training
9	1T+5P	The student understands the lesson	Drawing structural details of two-way solid slabs.	Theoreti cal Lecture + training	Discussion and training
11	1T+5P	The student understands the lesson	Drawing structural details of one-way and two-way polygon slabs.	Theoreti cal Lecture + training	Discussion and training

11	1T+5P	The student understands thelesson	Introduction / types of concrete joistsand drawing the structural details of simple joists with sections.	Theoreti cal Lecture + training	Discussion and training
12	1T+5P	The student understands the lesson	Drawing structural details for continuous tributaries and sections.	Theoreti cal Lecture + training	Discussion and training
13	1T+5P	The student understands thelesson	Drawing the structural details of single tributaries with their sections.	Theoreti cal Lecture + training	Discussion and training
14	1T+5P	The student understands thelesson	Introduction with drawing of structural details of prestressed precast joists.	Theoreti cal Lecture + training	Discussion and training
15	1T+5P	The student understands thelesson	Drawing a horizontal scheme (key) for the joists of a structural building and fixing the schedules and detailsof the joists.	Theoreti cal Lecture + training	Discussion and training
Second semester					
1	1T+5P	The student understands thelesson	Drawing the structural details of thetypes of concrete columns, drawingthe longitudinal and transverse sections, and showing the reinforcement of the columns.	Theoreti cal Lecture + training	Discussion and training
2	1T+5P	The student understands thelesson	Drawing structural details and vertical sections to illustrate the bonding of reinforcing steel to the columns of successive floors.	Theoreti cal Lecture + training	Discussion and training
3	1T+5P	The student understands thelesson	An introduction to the foundations /their types and the principle of their work, and drawing the structural details of the single, common foundation, the	Theoreti cal Lecture + training	Discussion and training

			foundations of the walls.		
4	1T+5P	The student understands thelesson	Drawing the structural details of thecontinuous foundations and the mat foundations.	Theoreti cal Lecture + training	Discussion and training
5	1T+5P	The student understands thelesson	Drawing the structural details of thefoundations of the pillars and their types with the hat.	Theoreti cal Lecture + training	Discussion and training
6	1T+5P	The student understands thelesson	Identifying concrete staircases and their types, straight staircase, straight halves of staircase, spiral staircase, with drawing of constructional details.	Theoreti cal Lecture + training	Discussion and training
7	1T+5P	The student understands thelesson	Drawing structural details of joints inbuildings, expansion joints, structural joints.	Theoreti cal Lecture + training	Discussion and training
8	1T+5P	The student understands thelesson	Drawing the structural details of thearmed walls of the elevators and the walls of the basements.	Theoreti cal Lecture + training	Discussion and training
9	1T+5P	The student understands thelesson	Introduction to factory and readyconstruction and drawing of structural details to connect walls with prefabricated ceilings.	Theoreti cal Lecture + training	Discussion and training
11	1T+5P	The student understands thelesson	Introduction to steel structures, theirsections, tables and how to obtain specifications and details of sections from them.	Theoreti cal Lecture + training	Discussion and training
11	1T+5P	The student understands thelesson	Drawing the structural details for the interconnection of the steel parts according to their load bearing.	Theoreti cal Lecture + training	Discussion and training

12	1T+5P	The student understands thelesson	The interconnection of the foundations and steel bases, the interconnection of the steel columns,the interconnection of the joists witheach other.	Theoreti cal Lecture + training	Discussion and training
13	1T+5P	The student understands the lesson	Details of the steel gable drawingand the interconnection of its ribs.	Theoreti cal Lecture + training	Discussion and training
14-15	1T+5P	The student understands thelesson	The use of the computer and its applications in the structural drawingof reinforced concrete structures.	Theoreti cal Lecture + training	Discussion and training

10. Course Evaluation	
Distributing the score out of 100 according to the tasks assigned to the student such asdaily preparation, daily oral, monthly, or written exams, reports.....etc	
11. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	The Institute's library for additional curricular resources..
Main references (sources)	Drawing and civil construction / Muhammad Rashad Al-Din Structural and civil drawing / Talal Abdel Rahim
Recommended books and references (scientific journals, reports...)	Books in the central library Other internet resources related to construction drawing and its details
Electronic References, Websites	Websites And Other internet resources related to construction drawing and its detail..

1. Course Name:
Surveying 2
2. Course Code:
3. Semester / Year:

Semester
4. Description Preparation Date:
14/10/2024
5. Available Attendance Forms:
In-person
6. Number of Credit Hours (Total) / Number of Units (Total)
(90) hours and (6) units
7. Course administrator's name (mention all, if more than one name)
Name: wasfi Salim Lazim Email: wasfi.Salim@stu.edu.iq

8. Course Objectives	
Course Objectives	• Familiarize students with angles and directionsand use them to find the coordinates of points • How to raise or erase a specific area using polygons and directions • Knowing the properties of horizontal and vertical angles. • Introduce the student to vertical and amplitude curves and ways to project them • Introducing the student to modern surveying devices and methods of working on them

9. Teaching and Learning Strategies	
Strategy	1- Asking questions and inquiries that are distinguished by depthand accuracy. 2- Directing the student towards understanding the cause and reason. 3- Developing a digital sense of expression.4- Brainstorming.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	3	Identify the theodolite device / its parts, its uses, types, set up the device, read the horizontal and vertical directions of different types.	Theory and Practical	1. Quick questions. 2. Weekly reports. 3. Daily exams. 4. Discussing problems and solutions
2	3	Examine and adjust the theodolite for all types of vertical and horizontal examinations, then find the device's constant.	Theory and Practical	
3	3	Methods of measuring horizontal angles with a theodolite.	Theory and Practical	
4	3	Traverse , types of traverses, their purposes and uses.	Theory and Practical	
5	3	Measure and correct the interior horizontal angles of a closed traverses.	Theory and Practical	
6	3	Methods for measuring the horizontal distances of the sides of a traverses.	Theory and Practical	
7	3	Draw closed and open traverses.	Theory and Practical	
8	3	Survey the traverses with theodolite and tape.	Theory and Practical	
9	3	Calculating the departures and the latitudes of the sides of th traverses and calculating the coordinates.	Theory and Practical	
10	3	Calculating the departures , the latitudes and the coordinates of the sides of the open traverses.	Theory and Practical	
11	3	Methods of measuring vertical angles with theodolite device.	Theory and Practical	
12	3	Finding the height of a building (target) that can be reached using the theodolite device	Theory and Practical	
13	3	Finding a building height (target) that cannot be reached by using the theodolite	Theory and Practical	
14	3	Finding the height of a building (target) by measuring three angles of elevation or depression with a theodolite	Theory and Practical	
15	3	Measure the length of an inaccessible building - measure the horizontal angle between two walls.	Theory and Practical	
Second semester				
1	3	Curves / types	Theory and Practical	
2	3	Horizontal curves (elements of the simple circular curve) and the equations used in designing the simple circular curve.	Theory and Practical	
3	3	Methods of projecting horizontal curves / method of tangent columns (Baker's method) - method of hypotenuses (offsets) - method of dividing the strings - method of angles of deviation	Theory and Practical	
4	3	Projection of curves using two theodolite devices.	Theory and Practical	
5	3	Draw a road with its horizontal curves.	Theory and Practical	

6	3	Convex and concave principal curves / Components / Calculation of the length of the vertical curve	Theory and Practical	
7	3	Vertical curve calculations.	Theory and Practical	
8	3	Triangulation, its purposes, its use, the selection of triangulation points, triangulation networks.	Theory and Practical	
9	3	Measure the base line for the triangulation and the work of the fortifications to measure the tape.	Theory and Practical	
10	3	Measuring the horizontal angles of the triangulation network, calculations and making the necessary fortifications.	Theory and Practical	
11	3	Tachometric survey, types of tachometers.	Theory and Practical	
12	3	Learn about modern electronic measuring devices and how to use them to measure horizontal and vertical distances.	Theory and Practical	
13	3	A general project on the construction of a road or a drainage channel with the calculation of the soil needed to complete the project with its horizontal and vertical curves	Theory and Practical	
14-15	3	An introduction to the device of the Shamah station. The use of the comprehensive station device in measuring the lengths of the sides of a polygon, internal angles and coordinates	Theory and Practical	

11. Course Evaluation

First Exam	Second Exam	assessment	Final Exam
10 degrees **practical**	**10** degrees **practical**	**10** degrees	**10** degrees **practical**
10 degrees **theory**	**10** degrees **theory**		**40** degrees **theory**

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	**المساحة المستوية والطبوغرافية**
Main references (sources)	**المساحة الهندسية**
Recommended books and references (scientific journals, reports...)	**Surveying principles and application**
Electronic References, Websites	

1. Course Name:

Construction machines

2. Course Code:

3. Semester / Year:
Semester
4. Description Preparation Date:
14/10/2024
5. Available Attendance Forms:
In-person
6. Number of Credit Hours (Total) / Number of Units (Total)
(60) hours and (4) units
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Ayad Abdulkhaleq Yahya Email: ayad.alyousuf@stu.edu.iq:

8. Course Objectives	
Course Objectives	1. Choosing the appropriate construction machine for work 2. Determining the productivity of the machines 3. Supervising the completion of work

9. Teaching and Learning Strategies	
Strategy	1. The discussion 2. Ask questions 3. Exams

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	The student's knowledgeof the importance of machines and ways to obtain them	The Construction equipmentimportance of methods of machines and the obtaining them advantages and disadvantagesof owning or renting machines, with a scientific .film showing	Presentationppt and videos	Discussing and asking questions

2	2	The student's knowledge calculating the costs of owning construction machinery	Calculating the ownership and costs machines (depreciation of costs, investment, . maintenance and repair)	Presentation ppt and videos	Discussing asking questions
3	2	The student's knowledgeof calculating the costs ofowning construction machinery	Completing the calculation ofcosts and ownership of machines, operating costs (fuel costs, oil costs, an explanation of an integrated mathematical question about .calculating all costs)	Presentationppt and videos	Discussing asking questions
4	2	The student's knowledgespecial and standard of machines	Special machines, standardmachines, and comparisonwith the between them presentation of a scientific . film	Presentation ppt and videos	Discussing asking questions
5	2	The student's knowledge engineering of the foundations of machineryworks	Engineering foundations for engineering machinery including (resistance, works to movement and the effect of . tilt)	Presentationppt and videos	Discussing asking questions
6	2	The student's knowledge of the engineering foundations of machineryworks	Complementing the engineering foundations for engineering machinery works(the effect of height, swellingand contraction of the soil at the expense of volumes)	Presentation ppt and videos	Discussing asking questions
7	2	The student's knowledge dozer construction of the machine and its importance	Including, the quarry (Dozerdescription of the machine, itstypes, productivity with a scientific) calculation . film showing	Presentation ppt and videos	Discussing asking questions

8	2	The student's knowledgeof the structural machine loading shovel of the its importance and	Loading shovel (Shovel) and includes (types, difference between them, productivity calculation, work cycle, work coordination) with two .scientific films	Presentation ppt and videos	Discussing asking questions
9	2	To view the construction machinery	to one of the A scientific visitbusiness sites machines different where . available are	Presentation ppt and videos	Discussing asking questions
10	2	Student's knowledge drilling machines of	Drilling machines, universaldrilling facial ,drilling rig with a scientific film rig . presentation	Presentation ppt and videos	Discussing asking questions
11	2	Student's knowledge of drilling machines	backhoe (Digging machines shovel, oyster , shovel hydronic with a scientific film) shovel . showing	Presentation ppt and videos	Discussing asking questions
12	2	The student's knowledge the different types of of transportation machines	Machinery and transport road trucks and paved , units paved, classification - non trucks according of multiple factors, tippers, tocalculated productivity is presentation of with the . scientific film a	Presentation ppt and videos	Discussing asking questions
13	2	The student's knowledge of the different types of transportation machines	Balancing the number of tippers with the size of drilling machines, lorries, locomotives and trailers, and .railway trucks	Presentation ppt and videos	Discussing asking questions
14	2	The student's knowledgestands and their of the types	The stands include (their types and benefits with the calculation of productivity)with	Presentation ppt and videos	Discussing asking questions

			the presentation of a . scientific film		
15	2	knowledge student's Thetypes of skimmers of theand their benefits	Skimmers, their types, and productivity benefits with a scientific ,calculation . film showing	Presentation ppt and videos	Discussing asking questions
Second semester					
16	2	Knowing the resistance student's calculating the to productivity of skimming	The productivity of the skimmer the use of the skimmer performance chart in .calculating the productivity	Presentation ppt and videos	Discussing asking questions
17	2	To view the construction machinery	to a business A scientific visitsite with a scientific film . showing	Presentation ppt and videos	Discussing asking questions
18	2	Student's knowledgesoil compacting of machines	Soil compaction machines and their importance, types, places of use, with a scientific . film showing	Presentation ppt and videos	Discussing asking questions
19	2	Student's knowledge of soil compacting machines	Complementing the Complementary Machines and Calculating Productivity,Theory of Pressure Bulb for .Weight Distribution	Presentation ppt and videos	Discussing asking questions
20	2	Student's knowledge of soil compacting machines	Supplementation of thevibratory rollers, the production of the rollers	Presentation ppt and videos	Discussing asking questions
21	2	The student's knowledge available equipment of the for mixing concrete	Material mixing equipmentwith a for concrete works . scientific film presentation	Presentation ppt and videos	Discussing asking questions

22	2	The student's knowledge equipment for of the transporting, stacking and polishing concrete	conveying Concrete . equipment compacting and	Presentation ppt and videos	Discussing asking questions
23	2	The student's knowledge of the asphalt knowledgeproduction factor and its	Asphalt production plants .types and specifications	Presentation ppt andvideos	Discussing asking questions
24	2	The student's knowledge Concrete transport, compaction and polishing equipment	Concrete transport, compaction and polishing equipment		
25	2				
26	2	The student's knowledge of Lifting machinery and equipment	Lifting machinery and equipment		
27	2	The student's knowledge of tower crane	tower crane		
28	2	Scientific visit			
29	2	The student's knowledge of Pillar machines	Pillar machines		
30	2	The student's knowledge of Air Compressors and Pumps	Air Compressors and Pumps		

13. Course Evaluation	
3- Mid Exam (30) 4- Evaluation (10) Final exam 60%	
14. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Construction machinery / Adnan Al-Daha
Main references (sources)	construction road planning and equipment / Part One / Dr. Muhammad Ayoub Al-Azi Quantitative Surveying / Salma Farhan Builders equipment / dr. Muhammad Ayoub Al-Ezzi

Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	Other sources on the internet

1. Course Name:	
Computer principles	
2. Course Code:	
3. Semester / Year:	
One semester	
4. Description Preparation Date:	
16/10/2024	
5. Available Attendance Forms:	
In presence	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 hours of study, 2 practical hours per week	
7. Course administrator's name (mention all, if more than one name)	
Name: Ahlam Aziz Jaafar Email; ahlamalmansorr@gmail.com	
8. Course Objectives	
Course Objectives; At the end of the Academic year, the student should be able to:-	**1- Operating the AutoCAD program and usingit for drawing.** **2- Run the AutoCAD program and use it inDrawing.** **3- The student can adjust the drawinginterface settings.** **4- Teaching the student how to use ready-made systems and their applications in completing civil fees.**
9. Teaching and Learning Strategies	

Strategy	Teaching and learning methods 1 - Objective questions are divided into: multiple choice questions, truand false questions, or comparison questions. 2 - Self-evaluation and peer evaluation.3- Tests include: A - Formative achievement tests accompanying teaching plans.B - The final achievement tests include: ● Monthly final exams at the end of each academic month. ● Semester final exams at the end of a semester. ● Final exams at the end of the academic year.
	Evaluation methods 1- Using achievement tests: ● Daily ● Monthly ● Quarterly ● Final
	C- Emotional and value goals - Proposing new ideas about the topic by the student. -The student's ability to evaluate the topic and give solutions. - Differentiate between problems. - Explains and analyzes phenomena and problems
	Teaching and learning methods: 1 - Use the presentation and presentation method.2- Drawing illustrative diagrams. 3- Brainstorming method.

10. Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**

1	2	The student understands the lesson	1-Auto CAD program: running the program and general concepts (running the program, getting to know the program's workspace, display cube, steering wheel, display movement, menus, toolbars, closing the program)	In-person education	A theoretical and practical lecture
2	2	The student understands the lesson	2-Open a previous drawing file, control the display of the contents of the drawing file using the Zoom command and its options, the Pan command, close the drawing file, create a new file, save the file -Preparing the drawing board - Units command andLimits command	In-person education	A theoretical and practical lecture
3	2	The student understands the lesson	Draw commands (Point, Line, formulas for defining point coordinates, Multiline) - Drawing commands (Polyline, Rectangle, Polygon) - Sectors and Hatch	In-person education	A theoretical and practical lecture

4	2	The student understands the lesson	Drawing commands (Circle, Arc, Ellipse) - Text writing commands (Single linetext, Multiline text, creating new style models for writing	In-person educati on	A theoretical and practical lecture
5	2	The student understands the lesson	Types of drawing linesand their uses - Control drawing specifications (Linetype, Line weight, Color) - Modify the propertiesof the drawing lines	In-person education	theoretical and practical lecture
6	2	The student understands the lesson	Drawing geometricshapes - Implementing thebasic shapes	In-peron education	theoretical and practical lecture
7	2	The student understands the lesson	Modify commands (Mirror, Array, Scale,Break, Extend)	In-person education	theoretical and practical lecture
8	2	The student understands the lesson	-Modify commands (Fillet, Chamfer, Trim,Explode)	In-person education	theoretical and practical lecture
9	2	The student understands the lesson	ow to add dimensions (Linear Dim., Aligned Dim., Radial Dim., Diameter) Dim., Angular Dim., QuickDim., Baseline Dim., Continuous Dim., Dimension Style	In-person educati on	theoretical and practical lecture

10	2	The student understands the lesson	Drawing different geometric shapes - Drawing exercise(test)	In-person educati on	theoretical and practical lecture
11	2	The student understands the lesson	Drawing applicationson geometric shapes - Drawing an exercisetest	In-person education	theoretical and practical lecture
12	2	The student understands the lesson	Drawing a buildingmap	In-person education	theoretical and practical lecture
13	2	The student understands the lesson	Drawing stairs	In-person education	theoretical and practical lecture
14	2	The student understands the lesson	Drawing foundations - Drawing an exercise(test	In-person education	theoretical and practical lecture
15	2	The student understands the lesson	Drawing three-dimensional shapes - Drawing exercise(test)	In-person education	theoretical and practical lecture
Second semester					
1	2	The student understands the lesson	Drawing 3D shapes Exercise drawing (test)	In-person education	theoretical and practical lecture
2	2	The student understands the lesson	Applications on commands extrude, revolve	In-person educati on	theoretical and practical lecture

3	2	The student understands the lesson	Applications to unionand subtract orders	In-person educati on	theoretical and practical lecture
4	2	The student understands the lesson	Complete solid editingcommands	In-person education	theoretical and practical lecture
5	2	The student understands the lesson	Create a simple building in three dimensions	In-person education	theoretical and practical lecture
6	2	The student understands the lesson	Making a model of a horizontal section in a residential building	In-person education	theoretical and practical lecture
7	2	The student understands the lesson	Thermal insulation techniques	In-person education	theoretical and practical lecture
8	2	The student understands the lesson	Concrete formwork (types, requirements, components)	In-person education	theoretical and practical lecture
9	2	The student understands the lesson	Lifting the formwork, the reasons that lead to the collapse of the formwork	In-person education	theoretical and practical lecture
10	2	The student understands the lesson	Scaffolds (types, components, safetyfactors)	In-person education	theoretical and practical lecture
10	2	The student understands the lesson	Secondary ceilings (types and methods of installing them) and installing air ducts	In-person educati on	theoretical and practical lecture

11	2	The student understands the lesson	- Doors and windows (types, requirements, components)	In-person education	theoretical and practical lecture
12	2	The student understands the lesson	Joints in manufactured construction, their types and components	In-person education	theoretical and practical lecture
29	2	The student understands the lesson	Methods of transportation in buildings, stairs, andelevators	In-person education	theoretical and practical lecture
30	2	The student understands the lesson	Fire resistance of buildings and firecontrol systems	In-person education	theoretical and practical lecture

11. Course Evaluation

First semester: 10% theoretical + 10% practical = 20%
Second semester: 10% theoretical + 10% practical = 20%
End of year evaluation 10%
Final work 50%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- Abdul Rasoul Al-Khafaf, Engineering Drawing, 1990 2- Dr. Khader Al-Abadi, Cartography, Map Locations, 1980, Baghdad 3- Tujan Saleh Al-Jaghbir, Basicsof AutoCAD, 2012, Amman
Main references (sources)	AutoCAD© smart book First editionBy:Mostafa Abd El-Basset Faculty of Engineering El Minya University

Recommended books and references (scientific journals, reports...)	1-Iraqi Journal of Industrial Research2-Al-Iraqia Journal for Scientific Engineering Research 3-Iraqi Journal of Oil and Gas Research
Electronic References, Websites	1-http://civilglobal.com 2-Different sites for AutoCAD drawings

1. Course Name:
Quantity Surveying
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
2024/10/14
5. Available Attendance Forms:
In-person
6. Number of Credit Hours (Total) / Number of Units (Total)
(45) hours for each semester and (6) units
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Marwan Adel Hassan Email:Marwan.adil@stu.edu.iq
8. Course Objectives

Course Objectives	• Calculating the amount of construction items involved in the implementation of Constructionand buildings • Knowledge of calculating prices, costs, and managing engineering projects
9. Teaching and Learning Strategies	
Strategy	1. The discussion 2. Ask questions 3. Exams

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	3	The student will be able to understand the lecture paragraphs	estimation and the mainpurpose of estimation	Explanation and clarification n throughlectures	Reports
2	3	The student will be able to understand the lecture paragraphs	Type of estimation	Explanationn and clarification n through lectures	Reports
3	3	The student will be able to understand the lecture paragraphs	Calculating the amount of construction work for the foundations of buildings.	Explanation and clarification through lectures	Reports
4	3	The student will be able to understand the lecture paragraphs	Calculating the amount of construction work for the foundations of buildings.	Explanation and clarification through lectures	Reports
5	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of construction work underthe D.P.C	Explanation and clarificatio n throughlectures	Reports
6	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of construction work underthe D.P.C	Explanation and clarificatio n throughlectures	Reports
7	3	The student will be able to understand the lecture paragraphs	Calculation of the amountof construction work a above the D.P.C	Explanation and clarificatio n throughlectures	Reports
8	3	The student will be able to understand the lecture paragraphs	Calculation of the amountof construction work a above the D.P.C	Explanation and clarification through lectures	Reports
9	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of concrete, reinforcement,and wooden form for foundations	Explanation and clarification through lectures	Reports
10	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of concrete, reinforcement,and wooden form for foundations	Explanation and clarification through lectures	Reports

11	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of concrete, reinforcement, and wooden form for beam	Explanation and clarification throughlectures	Reports
12	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of concrete, reinforcement, and wooden form for beam	Explanation and clarificatio n through lectures	Reports
13	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of concrete, reinforcement,and wooden form for column	Explanation and clarificatio n throughlectures	Reports
14	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of concrete, reinforcement, and wooden form for arch	Explanation and clarification through lectures	Reports
15	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of concrete, reinforcement, and wooden form for slab	Explanation and clarification through lectures	Reports
Second semester					
1	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of concrete, reinforcement, and wooden form for slab	Explanation and clarification through lectures	Reports
2	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of concrete, reinforcement, and wooden form for stairs	Explanation and clarificatio n throughlectures	Reports
3	3	The student will be able to understand the lecture paragraphs	Calculation of the amountof secondary slabs work	Explanation and clarification through lectures	Reports
4	3	The student will be able to understand the lecture paragraphs	Calculation of the amountof finishing work (spray walls)	Explanation and clarification through lectures	Reports

5	3	The student will be able to understand the lecture paragraphs	Calculation of the amountof finishing work (spray walls)	Explanation and clarification through lectures	Reports
6	3	The student will be able to understand the lecture paragraphs	Calculation of the amountof flooring work	Explanation and clarification through lectures	Reports
7	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of electrical and mechanical installations work	Explanation and clarificatio n through lectures	Reports
8	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of water and sanitary installations works	Explanation and clarification through lectures	Reports
9	3	The student will be able to understand the lecture paragraphs	Calculation of the amount of construction work for theprecast building	Explanation and clarification through lectures	Reports
10	3	The student will be able to understand the lecture paragraphs	Calculating the quantity ofsome works and construction paragraphs ofsteel structures	Explanation and clarification through lectures	Reports
11	3	The student will be able to understand the lecture paragraphs	Contracts and Contracting	Explanation and clarification through lectures	Reports
12	3	The student will be able to understand the lecture paragraphs	Engineering project management	Explanation and clarification throughlectures	Reports
13	3	The student will be able to understand the lecture paragraphs	Project scheduling	Explanation and clarification through lectures	Reports
14	3	The student will be able to understand the lecture paragraphs	Project scheduling	Explanation and clarification through lectures	Reports

15	3	The student will be able to understand the lecture paragraphs	Using the computer to calculate the structural paragraphs	Explanation and clarification through lectures	Reports
Main references (sources)					
Recommended books and references (scientific journals, reports...)			1- Quantitative Survey / Sami Miri Kathem, Abdul Karim Al-Shamaa / Ministry of Education / Technical Institutes Authority, 1994. 2 Structural materials / Jalal Bashir Sarsam / Ministry of Education / Technical Institutes Authority, 1992. 4 3 Estimation and specifications of construction works / Ghanem Abdul Rahman Bakr, 1985		
Electronic References, Websites					

1. Course Name:
Buildings and Factory Construction
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
2024/10/14
5. Available Attendance Forms:
In- person
6. Number of Credit Hours (Total) / Number of Units (Total):
(30) hours for each semester and (2) units
7. Course administrator's name (mention all, if more than one name)
Name: Walid Abboud Yassin Email: eng.waleed1964@gmail.com

8. Course Objectives

At the end of the academic year, the student will be able to organize the site, direct the works supervise their implementation, and the student will learn the basic principles and supervisefactory building.

9. Teaching and Learning Strategies

Strategy	1 Preparation and implementation of research and projects by studentswithin the vocabulary of buildings and factory construction and presented in annual student conferences. 2 Training students (summer training) at the relevant government institutions to gain students sufficient skills and prepare them for a job well. 3 Develop and update the vocabulary of buildings and factory building to keep.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	The student understandsthe lesson	Introduction to construction projects implementation methods related parties tasks of each of the construction project team members, especially technicians.	theoretical lectures	Discussion
2	2	The student understandsthe lesson	Organizing and planning the wsite and the factors that affect along with preparing a plan forwork site for a specific project	theoretical lectures	Discussion
3	2	The student understandsthe lesson	Earthen excavations, methodssupporting the sides of excavation, digging the basements	theoretical lectures	Discussion
4	2	The student understandsthe Lesson	Techniques used to ext groundwater during construction	theoretical lectures	Discussion
5	2	The student understandsthe lesson	Dirt spells and the correct ways t them Layers of roads and wayimplement them	theoretical lectures	Discussion
6	2	The student understandsthe Lesson	Moisture repellent layers basements and walls, flatness	theoretical lectures	Discussion
7	2	The student understandsthe	Building walls with bricks, typebricks, bonding	theoretical lectures	Discussion

		Lesson	methods, seams		
8	2	The student understandsthe Lesson	Building walls with stone (typestone preparation, types of fasten joints)	theoretical lectures	Discussion
9	2	The student understandsthe lesson	Building walls with building (types of blocks and specifications).	theoretical lectures	Discussion
10	2	The student understandsthe lesson	Techniques for finishing walls fthe inside of all kinds.	theoretical lectures	Discussion
11	2	The student understandsthe lesson	Techniques for finishing walls fthe outside of all kinds.	theoretical lectures	Discussion
12	2	The student understandsthe lesson	Flooring methods for the floor, other floors and ceilings.	theoretical lectures	Discussion
13	2	The student understandsthe lesson	thermal insulation techniques	theoretical lectures	Discussion
14	2	The student understandsthe lesson	Concrete forms (Requirements, Components)	theoretical lectures	Discussion
15	2	The student understandsthe lesson	Lifting molds, causes of mold failsliding molds and related technique	theoretical lectures	Discussion
Second semester					
1	2	The student understandsthe lesson	Scaffolding (types,safety factors)	theoretical lectures	Discussion
2	2	The student understandsthe lesson	Secondary ceilings (types methods of installation) installation of air ducts	theoretical lectures	Discussion
3	2	The student understandsthe lesson	Sanitary installations (pure w sewage), types of pipes used for eof them, and methods of installation.	theoretical lectures	Discussion
4	2	The student understandsthe lesson	Doors and windows (types,requirements, components)	theoretical lectures	Discuss
5	2	The student understandsthe lesson	Joints in buildings (structural jo expansion joints) details of eachand methods of implementation	theoretical lectures	Discussion
6+7	2	The student understandsthe lesson	Low-cost construction and cost-saving methods (objectives, requirements, construction method	theoretical lectures	Discussion
8	2	The student understandsthe lesson	Factory construction (properties,requirements)	theoretical lectures	Discussion

9	2	The student understandsthe lesson	The different types of factory building and the characteristics of each type	theoretical lectures	Discussion
10	2	The student understandsthe lesson	Factory Building Factory Components and Production Method	theoretical lectures	Discussion
11+12	2	The student understandsthe lesson	Details of the structural membersthe factory building and their installation methods	theoretical lectures	Discussion
13	2	The student understandsthe lesson	Joints in factory construction (components, methods of implementation)	theoretical lectures	Discussion
14	2	The student understandsthe lesson	Methods of moving in buildings,stairs, elevators (types, component construction methods	theoretical lectures	Discussion
15	2	The student understandsthe lesson	Fire resistance of buildings andfire control systems.	theoretical lectures	Discussion

11. Course Evaluation
1- The first semester is practical 20% 2- The second semester is practical 20%3- Year-end evaluation 10% 4- Practical final 50%

12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	• Civil Engineering / Mr. Bassiouni
Main references (sources)	• Construction of buildings / Zuhair Sako
Recommended books and references (scientific journals, reports...)	• Building materials / Ahmed Abu Odeh
Electronic References, Websites	Other sources on the internet

1. Course Name:
Baath regime crimes
2. Course Code:
3. Semester / Year:
Semester

4. Description Preparation Date:
14/10/2024
5. Available Attendance Forms:
In-Person
6. Number of Credit Hours (Total) / Number of Units (Total)
(2) hours per week= 30 total hours
7. Course administrator's name (mention all, if more than one name)
Name: Mohammed Khalil Ismail Email: mohammedalharb93@gmail.com
8. Course Objectives

Course Objectives	1. Embodying the vision, mission and goals of the Southern Technical University, and applying the best educational practices with a focus on ensuring and enhancing quality and performance. 2. Empowerment Students from examining on Crimes system party Resurrection the previous that committed it in Iraq which done trial Leadership And the henchmen order On it from before The court Criminal Iraqi.

9. Teaching and Learning Strategies	
Strategy	1–Lectures 2- laboratory 3-mechanical workshops 4- systematic training 5-summer training

10. Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
First	2	1Expanding students' understanding of the concept of crimes. 2- Informing students about the crimes of the Baath regime. 3- Developing students' abilities to contribute to spreading the truth about what the Baath regime committed	The concept of crimes and their types	Lecture	Daily, weekly and monthly exams Oral and written And end of year exams
Second	2		Types of international crimes		
Third	2		The crime suppressing the popu uprising		
Fourth	2		Psychological crimes		
	2		The		

Fifth			mechanism of psychological pressure		
Sixth	2		Psychological effects of crimes		
Seventh	2		Violations of Iraqi laws		
Eighth	2		Some decisions on psychological violations		
Ninth	2		Environmental crimes		
Tenth	2		Drying the marshes		
Eleventh	2		Halabja city		
Twelfth	2		Mass grave crimes		
Thirteen	2		- Events extending fi 1979-2003		
fourteenth	2		Events of the two-uprising		
fifteenth	2		Genocide Cemeteries for Victims of the Shaaban Uprising		

11. Course Evaluation	
30 marks, 10 year work , 60 points for the final exam.	
12. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	_ The textbook / Crimes of the Baath regime in Iraq 2_ Archive of the Political Prisoners Foundation 3_ Martyrs Foundation Archive
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

13. Course Name:
English 2
14. Course Code:
15. Semester / Year:
One Semester
16. Description Preparation Date:
14/10/2024
17. Available Attendance Forms:
In-Person
18. Number of Credit Hours (Total) / Number of Units (Total)
(2) hours per week= 30 total hours
19. Course administrator's name (mention all, if more than one name)
Name: Mahmoud Abdel- Ilah Abdel- Moneim Email: muhmood.abid@stu.edu.iq
20. Course Objectives

Course Objectives	Preparation and implementation of research and projects by students within the vocabul section of space technology materials and the introduction of the applications of mathematics presented in the annual student conferences. Develop and upgrade of the vocabulary of mathematics to keep up with development in ordeachieve personal development to the level of the students

21. Teaching and Learning Strategies

Strategy	1–Lectures 2- laboratory 3-mechanical workshops 4- systematic training 5-summer training

22. Course Structure

Week	**Hours**	**Required Learning Outcomes**	**Unit or subject name**	**Learning method**	**Evaluation method**
First	2	1Expanding students' understanding of the concept of English language. 2- Developing students' abilities in speaking.	Unit one: getting to know you Tenses Questions Questions words	Lecture	Daily, weekly and monthly exams Oral and written And end of year exams
Second	2		Unit two: the way we live Present tenses Present simple Present continuous Have / have got		
Third	2		Unit three: it all went wrong Past tenses Past simple Past continuous		
Fourth	2		Unit four: let's go shopping Quantity Much and many Some and any Something, anyone, nobody, everywhere		

			A few, a little, a lot of Articles		
Fifth	2		Unit Five: what do you want to do Past tenses Verb patterns 1 Future intentions Going to and will		
Sixth	2		Unit six: tell me! What's it like? What's it like? Comparative and superlative Adjectives		
Seventh	2		Unit seven: fame Present perfect and past simple For and since Tense revision		
Eighth	2		Unit eight: do's and don'ts Have(got) to Should must		
Ninth	2		Unit nine: going places Time and conditional clauses what if...?		
Tenth	2		Unit ten: scared to death		

			Verbs patterns Infinitives What, etc.+ infinitive Something, etc.+ infinitive		
Eleventh	2		Unit eleven: things that changed the world Passives		
Twelfth	2		Unit twelve: dreams and reality Second conditional might		
Thirteen	2		Unit thirteen: earning a living Present perfect continuous Present perfect simple versus Continuous		
fourteenth	2		unit fourteen: family ties Present perfect and past perfect and clarification Reported statements		
fifteenth	2		Unit fifteen: revision.		

23. Course Evaluation
30 marks, 10 year work, 60 points for the final exam.

24. Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Required textbooks (curricular books, if any) *Newheadway Plus, Pre-Intermediate Student's bby John & Liz Soars Press. Oxfor Newheadway Plus, Pre-Intermediate Student's bby John & Liz Soars Press. Oxford *Newheadway Plus, Beginner Workbook by John & Soars Press. Oxford
Main references (sources)	
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1Course Name:
Concrete technology
2. Course Code:
3. Semester / Year:
Semester
4. Description Preparation Date:
14/10/2024
5. Available Attendance Forms:
In-Person
6. Number of Credit Hours (Total) / Number of Units (Total)
(2 theoretical + 2 practical) by (4) hours per week = 60 total hours per semester
7. Course administrator's name (mention all, if more than one name)

Name: Name: Dr. Hanadi Abdul Redha Latif
Email: hanadi.ridha@stu.edu.iq

8. Course Objectives

Course Objectives	Teaching the student the basic principles of concrete components, their composition, and different methods of pouring Concrete and its production in construction sites, modern types of concrete, and pact details of concrete works

9. Teaching and Learning Strategies

Strategy	Explanation and clarification through lectures2 - Graduation Projects 3- Scientific visits reports

10.Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	4	The student will able understand lecture paragraph	General review of materials uin concrete. Definitions: Ordinary Concrete, ReinforceConcrete, Casting Concrete, Pre-mixed Concrete, Precast Concrete, Prestressed Concrete.	Explanation clarification throu lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Second	4	The student will be able to understand the lecture paragraphs	Concrete production and mixing, types of mixing,types of mixers, mixing time	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Third	4	The student will be able to understand the lecture paragraphs	Fresh concrete properties: workability	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems

					and solutions
Fourth	4	The student will be able to understand the lecture paragraphs	fresh concrete tests:, penetratitest, slump test, compaction factor test, remodeling test wivibrations and reciprocating vibrations, study of factors affecting workability	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Fifth	4	The student will be able to understand the lecture paragraphs	fresh concrete properties	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Sixth	4	The student will be able understand the lecture paragraphs	fresh concrete properties	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Seventh	4	The student will be able understand the lecture paragraphs	Effect of air spaces and methoof their measurement, calculatunit weight, yield, cement factin fresh concrete, density equation and absolute volume equation for calculating concr components	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions Quick questions. Weekly reports. Daily exams. discussion Problems and solutions

Eighth	4	The student will be ableto understand the lecture paragraphs	Effect of air spaces and methoof their measurement, calculatunit weight, yield, cement factin fresh concrete, density equation and absolute volume equation for calculating concr components	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Ninth	4	The student will be ableto understand the lecture paragraphs	Transportation, and compaction of concrete \	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Tenth	4	The student will be ableto understand the lecture paragraphs	Curing of concrete	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Eleventh	4	The student will be ableto understand the lecture paragraphs	Curing of concrete	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Twelfth	4	The student will be ableto understand the lecture paragraphs	ready mix concrete	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
	4	The student will be ableto understand the	Hardening Concrete	Explanation and clarification through lectures	Quick questions. Weekly

Thirteen		lecture paragraphs	Resistanc		reports. Daily exams. discussion Problems and solutions
fourteenth	4	The student will be ableto understand the lecture paragraphs	Concrete Strength Tests	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
fifteenth	4	The student will be ableto understand the lecture paragraphs	Factors affecting the resistanc hardening concrete.	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Second semester					
First	4	The student will be ableto understand the lecture paragraphs	Concrete shrinkage	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Second	4	The student will be ableto understand the lecture paragraphs	Concrete admixtures	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Third	4	The student will be ableto understand the lecture paragraphs	Type of Concrete admixtures	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems

					and solutions
Fourth	4	The student will be ableto understand the lecture paragraphs	Concrete mix design: A-American method	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Fifth	4	The student will be able to understand the lecture paragraphs	Concrete mix design: B - Briti method	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Sixth	4	The student will be able to understand the lecture paragraphs	Practical problems for designiordinary mixtures	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Seventh	4	The student will be ableto understand the lecture paragraphs	Practical problems for the desof mixtures containing additiv	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Eighth	4	The student will be ableto understand the lecture paragraphs	Non-destructive testing of concrete	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Ninth	4	The student will be ableto understand the lecture paragraphs	The use of fibers in concrete	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily

					exams. discussion Problems and solutions
Tenth	4	The student will be ableto understand the lecture paragraphs	The use of fibers in concrete	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Eleventh	4	The student will be ableto understand the lecture paragraphs	Special types of concrete: blo light weight, heavy concrete, underwater concrete, precast aggregate	Explanation and clarification through lectures Explanation and clarification throughlectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Twelfth	4	The student will be ableto understand the lecture paragraphs	Special types of concrete: Hig Performance Concrete (HPC), High Strength Concrete (HSC Self-compacting Concrete (SC Reactive Powder Concrete (RPC), Ridge Compacted Concrete (RCC).	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
Thirteen	4	The student will be ableto understand the lecture paragraphs	Special types of concrete: Hig Performance Concrete (HPC), High Strength Concrete (HSC Self-compacting Concrete (SC Reactive Powder Concrete (RPC), Ridge Compacted Concrete (RCC).	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions Quick questions. Weekly reports. Daily

					exams. discussion Problems and solutions
fourteenth	4	The student will be ableto understand the lecture paragraphs	Repair, maintenance and treatment of concrete in buildings, using some modern materials such as epoxy andcarbon fibres	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions
fifteenth	4	The student will be ableto understand the lecture paragraphs	Repair, maintenance and treatment of concrete in buildings, using some modern materials such as epoxy and carbon fibres	Explanation and clarification through lectures	Quick questions. Weekly reports. Daily exams. discussion Problems and solutions

11.Course Evaluation	
20 particular+ 20 theoretical+10 year work, 50 final exam	
12.Learning and Teaching Resources	
Required textbooks (curricular books, if any)	Concrete Technology - Galal Bashir Sarsa 1986
Main references (sources)	1Concrete additives, Moayad Nouri Al-Khalaf and Hana Abdel Youssef, 1991. . 2 - A.M. Neville 'Properties of Concrete'. 3- Concrete Technology, Moayad Nouri Al-Khalaf and HanaAbdel Youssef, 1984. Concrete Technology, Shaker Ahmed Sa andMohamed Ayoub Sabry, 1992
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1.	Course Name
Graduation Project	
2.	Course Code:
3.	Semester/Year: Annual
Yearly / Second stage	
4.	The history of preparation of this description:
2024/10/14	
5.	Available Attendance Forms:
My presence only	
6.	Number of Credit Hours (Total) / Number of Units (Total):
60 hours in the second semester (2 hours of work over 30 weeks) / 4 units	
7.	Course administrator's name (if more than one name)
Name: Dr. Marwan Adel Hassan marwan.adil@stu.edu.iq: الايميل Name: Eng. Abeer Sabri Bishara abeermaj@stu.edu.iq: الايميل Name : Dr. Hanadi Abdulredha Latif hanadi.ridha@stu.edu.iq: الايميل Name : Dr. Iyad Abdel Khaleq Yahya ayad.alyousuf@stu.edu.iq: الايميل Name: Eng. Wasfi Salem Mustem	
8.	Course Objectives
Students carry out a project within the specialized subjects in civil technologies, conduct all field and office work, and submit a final report with all necessary accounts, plans and maps	
9.	Teaching and Learning Strategies
1. Cognitive strategies. 2. Active learning strategies. 3. Cooperative learning strategies. 4. Discussion strategy.	**Strategy**
10.	Course Structure

Valuation Method	Learning method	Unit or TopicNam	Intended Learning Outcomes	Hours	Week
First semester					
Reports & Discussions	Practical lectures	Conducting research and reviewing the available references and materials related to the subject of the project, reviewing specialists and departments to increase knowledge on that subject and writing abbreviations on how to plan the project and program its timings	Enable the student to work in groups and develop team spirit. -1 The skill of scientific research and conducting -2	2Houer weekly	1-3

		Revising the information available above and preparing the requirements of equipment, devices, plates, symbols and other accessories, and starting the implementation of the project in its field or laboratory stages first, then demarcation and the subsequent calculations, plans and maps according to the nature of the project	studies and .research 3- Applying what has been learned at various stages of the study to form a practical balance of knowledge for the future of field work ي		4-7
		Complement the field, laboratory or demarcation work of the project and under the directives of the supervising teacher			8-25
		Conducting final calculations, drawings, plans and maps and presenting the final report of the project to the competent supervisor			26-29
		Delivery and conduct of the final interview for the evaluation of the project			30

11. Course Evaluation	
Distribution as follows: 100 degrees	
12. Learning and Teaching Resources	
	Required textbooks (methodology, if ar
	Main references (sources)
Access to many scientific journals issued by various universities in Iraq in addition to visits to scientific libraries and the library of the Institute	Recommended books and reference (scientific journals, reports...)
	Electronic References, Websites