Academic Program Description Form

University Name: Al-Furat Al-Awsat Technical University
College/Institute: Karbala Polytechnic College
Academic Department: Department of Building and Construction Engineering Technologies
Academic or professional program name: Building and Construction Engineering Technologies
Final Certificate Title: Diploma or Bachelor of Science in Building and Construction Engineering Technology
Academic system: Semester-based
Description preparedon :29/9/2025
Date the file was filled: 18/12/2025

جامعة الفرات الاوسط التقنية
قسم هندسة تقنيات البناء والانشاءات
كلية التقنية - كربلاء

Signature: 21/12/2025
Scientific Associate Name:
Assi. Prof. Abdul Khider Aziz Mutasher
Date:

Signature:
Scientific Associate Name:
Assi. Prof. Dr. Mohamad Fadhil Neamha
Date: 21-12-2025

The file was reviewed by
Department of Quality Assurance and University Performance
Name of the Director of the Quality Assurance and UniversityPerformance:
Assi. Prof. Ali Neamah Hasan
Date:
Signature:

A pproval of the Dean

Ministry of Higher Education and Scientific Research
Scientific Supervision and Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description Guide

2026

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Introduction

of Building and Construction Engineering Technology at Al-Furat Al-Awsat was established in 2025 to offer a Diploma in Civil Technology Technical University and a Bachelor of Science in Civil Engineering. The department operates on a semester system, requiring either two or four academic years of study and the completion of credit hours. The comprehensive curriculum for the technical diploma is designed 136 to ensure graduates possess both the theoretical foundations and practical applications .of civil technology

The department seeks to attract highly qualified academic and administrative engineers and staff by ensuring the continuous development of staff skills in relation ;to the department's achievements and by encouraging scientific research work .Prioritize practical, applied research

Engineering Technologies The construction industry supplies the labor of Department ,market with specialists in building materials inspection, soil laboratory testing AutoCAD2D and , 3D ,skills, the use of surveying equipment for building projects and map preparation are all part of this program. It also provides the labor market with ,qualified technical personnel capable of executing various civil works projects conducting laboratory and field tests, preparing maps and surveys, and calculating quantities and dimensions for civil works projects. They will be able to apply their knowledge in estimating and calculating quantities and specifications for civil works projects. Furthermore, they will be able to maintain laboratory equipment and address construction industry challenges to improve production and achieve environmental .sustainability

Concepts and terminology:

Academic Program Description : This academic program description provides a concise summary of the program's key features and the expected learning outcomes for students, demonstrating whether they have made the most of the available .opportunities. It includes a description of each course within the program

Karbala Polytechnic College	**1. Educational institution**
Department of Building and Construction Engineering Technology	**2. Scientific Department Center /**
Building and Construction	**3. Name of academic or professional program**
Technical diploma or bachelor's degree Engineering Technology	**4. Name of final certificate**
quarterly	**5. :Study system / Annual / Courses Other**

ABET	**6. Accredited Accreditation Program**
There is a close relationship with the labor market through communication with official, semi-official and unofficial departments, focusing on laboratory ,tests and civil works practiced in those departments .as the curricula are updated accordingly	**7. Other external influences**
2025/9/29	**8. Date of preparation of description**

Course description : This course description provides a concise summary of the course's key features and the expected learning outcomes for students, demonstrating whether they have made the most of the available learning opportunities. It must be **.** linked to the program description

Program vision

Building and Construction Engineering Technology is working The Department of ,towards expanding the base of technical education and its modern applications building close relationships with various sectors of society in the field of exchanging scientific and practical expertise, and activating the role of scientific .research in various development fields

Program Mission

The aim is to develop highly qualified personnel in the field of construction engineering technology, contributing to the achievement of development plans and meeting the needs of the labor market. It also seeks to promote scientific research by publishing rigorous studies that support the advancement of science and education, in addition to providing technical services and contributing to solving problems related to the quality of building materials. scientific and Disseminating to produce national engineering sciences technical knowledge in the field of civil cadres at the level of technological development to keep pace with global developments and to fulfill the following

- Focus on using computer, internet , digitization and artificial intelligence technologies and incorporating them into the field of construction and building in .education and training
- Opening up to the community in the construction industry and activating the relationship with the private sector in the field of engineering consulting, training .and technical qualification

- Developing educational and training curricula in line with scientific development and introducing modern methods in training and qualification, and graduating .technical personnel to acquire high skills in the field of building and construction

Commitment to promoting joint scientific research between academics in the department and competent and experienced industrial staff to solve construction . industry problems and develop its production using modern methods

: Program objectives

1. Graduating qualified technical and engineering personnel to carry out various civil works projects, conduct laboratory and field tests, execute maps and .surveys, and calculate quantities and measurements of civil works projects
2. To complete the largest number of applied scientific research projects in .cooperation with relevant ministries and departments
3. Ensuring ongoing cooperation between the department and development .sectors in the engineering and consulting fields

Curriculum structure : All courses/study materials included in the academic program according to the approved learning system (semester, annual, Bologna track), whether required by (Ministry, University, College and Scientific .Department), with the number of study units

First academic year/ semester system

Level	Semester	No.	Module Code	Module Name in English	اسم المادة الدراسية	Language	SSWL (hr/w)						Exam	SSWL	USSWL	SWL	ECTS	Module Type	Prerequisite Module(s) Code	Structured SWL (h/w)	UnStructured SWL (h/w)	SWL (h/w)
							CL (hr/w)	Lect (hr/w)	Lab (hr/w)	Pr (hr/w)	Tut (hr/w)	Semn (hr/w)	hr/sem	hr/sem	hr/sem	hr/sem						
	One	1	BCE111-22-PM	Engineering mechanics (1)	الميكانيك الهندسي (1)	English	4				2		3	93	107	200	8.00	C		6.2	7.1	13
		2	BCE112-22-PM	Engineering drawing	الرسم الهندسي	Arabic	2		4				3	93	57	150	6.00	C		6.2	3.8	10
		3	BCE113-22-PM	Mathematics (1)	الرياضيات (1)	English	3				2		3	78	122	200	8.00	B		5.2	8.1	13
		4	BCE114-22-PM	Workshop	معامل	Arabic				2			3	33	17	50	2.00	S		2.2	1.1	3
		5	ATU10	English Language (1)	اللغة الإنكليزية (1)	English	2						3	33	17	50	2.00	S		2.2	1.1	3
		6	ATU11	Arabic Languge (1)	اللغة العربية (1)	Arabic	2						3	33	17	50	2.00	S		2.2	1.1	3
		7	ATU13	Human rights & democracy	حقوق الانسان والديمقراطية	Arabic	2						3	33	17	50	2.00	S		2.2	1.1	3
						Total	15	0	4	2	4	0	21	396	354	750	30			26.4	23.6	50.0
						Total hr/w	25															

Learning Outcomes A consistent set of knowledge, skills, and **:**values after the successful completion of the academic program. The learning outcomes for each course must be defined in a way that achieves the program's objective.

The Department of Civil Technologies is moving towards expanding the base of technical education and its modern applications, building a close relationship with various sectors of society in the field of exchanging scientific and practical experiences and activating the role of scientific research in various development fields.

(a Cognitive objectives

1- The graduate must possess the ability to think critically on his own, solve problems manage resources and time, describe the general specialization and its concepts in a scientific and engineering manner, and make the appropriate changes accordingly

2- The ability to perform engineering analysis and scientific thinking by applying the laws of mathematics and engineering and adhering to the guidelines and instructions for any activity within the organizational and administrative framework in ,mplementing a project or facing an engineering problem, solving it, evaluating it and submitting a proposal or plan, or reformulating, translating, or interpreting it

3- The student must be able to speak and write in an effective scientific and engineering style in both Arabic and English.

4- Adherence to the ethics of professional practice and the ability to demonstrate high professional competence, in addition to commitment to personal appearance and .behavior

5- To be familiar with international civil engineering standards, to estimate market needs, to apply quality management concepts in engineering work, and to have .acquired skills in information technology

6- To be interested in protecting the environment from pollution from factory and .industrial waste, etc

B - Program-specific skills objectives

1- The ability to apply civil engineering techniques while taking into account industrial and commercial constraints.

2- Analyzing engineering problems, finding solutions, and being able to suggest suitable alternatives.

3-Scientific inquiry and evaluation

4-Constructive engineering discussions and expressing opinions

Teaching and learning strategies : lectures, identifying and diagnosing problems through explanation, exercises and classroom drills, practical applications to help students understand how to benefit from the specifications used and understand their .application

:Evaluation methods

1. Giving homework
2. Daily exams
3. Asking some questions

1. Program Vision

in the field of modern building and construction technologies seeks to achieve leadership It and to build a technical education system with an applied and practical framework that takes . .into account scientific progress in building and construction and the needs of the labor market

2. Program message

,The aim is to develop highly skilled personnel in the field of construction technologies .contributing to the achievement of development plans and meeting the needs of the labor market It also seeks to promote scientific research by publishing rigorous studies that support the advancement of science and education, in addition to providing technical services and contributing to solving problems related to the quality of building materials. Disseminating to produce national engineering sciences scientific and technical knowledge in the field of civil cadres at the level of technological development to keep pace with global developments and to :fulfill the following

- Focus on using computer, internet , digitization and artificial intelligence technologies and .incorporating them into the field of construction and building in education and training
- Opening up to the community in the construction industry and activating the relationship with .the private sector in the field of engineering consulting. Technical training and qualification
- Developing educational and training curricula in line with scientific development and introducing modern methods in training and qualification, and graduating technical personnel .to acquire high skills in the field of building and construction

Commitment to promoting joint scientific research between academics in the department and competent and experienced industrial staff to solve construction industry problems and develop . its production using modern methods

3. Program objectives

1. Graduating qualified technical personnel to carry out various civil works projectsonduct laboratory and field tests, execute maps and surveys, and calculate quantities and .measurements of civil works projects
2. Preparing distinguished personnel in the field of civil engineering technologies, with the competence that qualifies them in the labor market to serve comprehensive development by contributing to the implementation of projects and opening new horizons of scientific research for future development. And preparing qualified technicians in line with the responsibilities that await them in workplaces by providing students with the fundamentals of knowledge in supporting technical disciplines.
3. Adopting continuous improvement in acquiring communication and teamwork skills in various multidisciplinary projects.

,Increased ability to continue learning and acquiring skills to develop professional performance creative thinking, and work planning based on community values and professional ethics.

4. **Program accreditation**
Is the program accredited? If so, by which body? No
5. **Other external influences**
Is there a sponsor for the program? No

6. **Program structure**				
*** comments**	**Percentage**	**Study unit**	**Number of courses**	**Program structure**
				Institutional requirements
				College requirements
				Department requirements
				Summer training
				Other

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

Program Description				**7.**
Credit Hours		**Course name**	**Course code**	**Year / Level**
practical	**theoretical**			
7	**13**	Civil Engineering Technology	**BCE**	First-Second semester
21	**12**	Karbala Technical Institute	**TC**	Second

8. Expected learning outcomes of the program	
of Knowledge Pain	
1. Problem-solving, resource and time management, describing the general discipline and its concepts in a scientific and engineering manner, and making appropriate changes .accordingly	1. The graduate possesses the ability to think .critically on their own 2. The ability to perform geometric

2. Adherence to the guidelines and instructions for any activity within the organizational and administrative framework in implementing a ,project or facing an engineering problem solving it, evaluating it, submitting a proposal or plan, or reformulating, translating, or .interpreting it 3. The ability to demonstrate high professional competence, in addition to a commitment to .personal appearance and behavior 4. Predicting market needs and applying quality ,management concepts in engineering work while acquiring skills in information .technology 5. To be interested in protecting the environment from pollution from factory and industrial .waste, etc	analysis and think scientifically by applying the laws of mathematics and .engineering 3. The student should be able to speak and write in an effective scientific and engineering style in both Arabic and .English 4. Adherence to professional ethics and the ability to demonstrate high professional competence, in addition to commitment to personal appearance .and behavior 5. To be familiar with international civil engineering standards
Skills	
1. The ability to apply civil engineering techniques while taking into account industrial .and commercial constraints 2. Analyzing engineering problems, finding solutions, and being able to suggest suitable .alternatives 3. Constructive engineering discussions and .expressing opinions	1. The ability to apply civil engineering .techniques 2. Analysis of engineering .problems 3. Scientific inquiry .and evaluation
Values	

1. 'Encouraging the development of students engineering thinking in memorization and guessing, and stimulating them towards critical thinking and thinking in the pre-.memorization stage 2. Developing internet research skills to broaden .one's knowledge horizons 3. Bringing out the creative ideas of some .talented students	1. Present the engineering or design problem and ask for suggestions on possible solutions or .improvements 2. Developing internet research skills to broaden one's .knowledge horizons 3. Using brainstorming to bring out creative ideas for some .talented students

9. Teaching and learning strategies

Strategies and methods of teaching and learning adopted in the implementation of .the program in general

There are many teaching and learning methods used in the field of building and construction, and the most important of these methods are: (theoretical and practical lectures, discussion and dialogue, field visits, discussion groups on ,(specific topics, theoretical and practical student research, library activities :which helps students to reach the following results

The engineering ability to distinguish between correct information and -1 .incorrect information

.Ease of scientific formulation and ease of correction -2

.The ability to memorize and guess -3

.The ability to link engineering concepts, principles, and instructions -4

.The ability to recall, connect, and interpret -5

Assessment methods

- .Engineering projects and seminars
- .Scientific discussion, oral dialogue, and midterm and final exams
- .Homework
- .Practical activities and case studies

- Writing and submitting reports and taking notes on the engineering .experiences gained during field visits

Achievement tests are used to determine the level of information and skills a learner has acquired in a subject that has been previously learned, through their .answers to questions and paragraphs that represent the content of the subject

10. Assessment methods

The department has adopted clear and high-quality student learning assessment methods and tools to maintain the quality of its graduates and the department's academic reputation. This is reflected in the university's regulations and requirements for continuous student assessment, which include several types of evaluation methods to ensure the quality of the graduate, who represents the final outcome of the educational process. Among the most important evaluation :methods are

,a) Objective tests to measure knowledge of geometric facts, comprehension application of scientific knowledge in new situations, and recall, through the :following

- .True or false questions
- .Multiple choice questions
-) Interview questionsmatching items .(
- Completion questions.

:b) Engineering tests relating to the following matters

- .Remember the facts and figures
- .Understanding the scientific material and engineering principles
- .The ability to recall, connect, and interpret
- Simply applying knowledge in interpreting data, diagnosing and solving .problems

:This is done through the following

- -:Communication test / Open questions
- .Questions that have a specific answer

Questions that do not have a specific answer, and which aim to stimulate the :student to

- .Having the ability to answer freely
- .Possessing organizational skills
- .Having the skill to organize thoughts

.Preventing and combating cheating

11.Faculty

Faculty members

Faculty preparation		Special requirements/skills (if any)		Specialization		academic rank
lecturer	angel			private	general	
	√			2	1	professor
	√				1	assistant professor
	√			1	1	Lecturer
	√			8	3	Assistant Lecturer

Professional Development
Orienting new faculty members
Orienting new faculty members is of paramount importance due to its profound impact on maintaining their high performance and active role in the educational process. To address the various difficulties and challenges new faculty members face at the beginning of their tenure, this orientation is organized by the Deanship under the auspices of the University President, reflecting its significance within the academic community. The orientation program generally focuses on five main :areas, which are subject to change based on organizational changes and feedback 'familiarizing new faculty members with their rights and responsibilities, students rights and obligations, program quality and academic accreditation, learning .resources, and the university's scientific research programs
Professional development of faculty members
Professional development is important and plays a role In achieving quality in higher education, the roles of faculty members are generally limited to teaching and assessment, guidance and mentorship, writing and translation, professional development, community service, and scientific research. These roles are categorized into four main areas related to students, the educational institution, the local community, and the faculty member's own role. Regarding quality requirements and their relationship to faculty members, it has been shown that quality requires the quality of the faculty members themselves, as they are an active element in achieving quality, based on their input. The means of professional development for faculty members have generally focused on: 1- Self-development based on the faculty member's personal efforts through reading, attending seminars and lectures, participating in conferences and discussion panels, conducting studies .and research, writing, and translation

Institutional Development: This is the development that is planned and _2 supervised by a specialized unit in the educational institution, which can employ continuous training courses, workshops, discussion panels, hosting visiting professors, exchanging visits and research participations. Training is considered the .most important means of professional development

The importance of professional development tools and the importance of professional development in raising the level of inputs, processes and outputs in the educational system, especially since professional development will positively affect the development of performance levels in various fields, achieving .commitment and individual responsibility and confirming the spirit of teamwork

These elements constitute the basics of individual and collective responsibility in achieving quality education. Therefore, professional development is a requirement for achieving quality and without it, achieving quality will be difficult and the .desired performance consistent with quality requirements will not be achieved

12.**Admission standard**

,Establishing the regulations related to enrollment in the college or institute) (whether central admission or other mentioned

Central admission for preparatory studies, vocational schools, and parallel admission

13.**Key sources of information about the program**

- Affairs Procedures Guide , Admission Regulations and Requirements
- Orders issued by the Ministry and the University
- University Examinations Management Guide for Undergraduate Studies

14.Program development plan

Engineering Technology generally focuses on continuous development. The department always strives to develop the scientific and administrative process and overcome all difficulties and obstacles that hinder the educational program by .developing human resources to develop the personality

The following procedures outline the steps that have been implemented or are in the :process of being implemented in this area

Continuous development of faculty members through training programs and .1 .workshops within and outside the department, university and country

Increase extracurricular activities such as holding conferences, scientific .2 seminars, and personal and sports creative events locally, regionally and .internationally

Encouraging faculty members to obtain the highest academic and administrative .3 .ranks

Providing modern scientific resources and books to the department library to keep .4 .pace with the rapid advancements in engineering sciences

Providing specialized software in mechanical engineering and the necessary .5 .computers for it, along with internet connections for all instructors

Program Skills Plan															
Learning outcomes required from the program															
Values				Skills				Knowledge				Essential or optional	Course Name	Course code	Year / Level
Q4	Part 3	Part 2	Part 1	B4	B3	B2	B1	A4	A3	A2	A1				
✓	✓			✓	✓	✓		✓	✓			specialty	Engineering Mechanics (1)	BCE111	Semester One First stage
✓	✓			✓	✓	✓		✓	✓			specialty	Engineering Drawing	BCE112	
✓	✓			✓	✓	✓		✓	✓			specialty	Mathematics	BCE113	
✓	✓			✓	✓	✓		✓	✓			specialty	Human rights and democracy	ATU10	
✓	✓			✓	✓	✓		✓	✓			assistant	English Language	ATU11	
✓	✓			✓	✓	✓		✓	✓			assistant	Arabic	ATU12	
✓	✓			✓	✓	✓		✓	✓			assistant	Factors	BCE114	

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

Course description

Module Information
Course Information

Module Title	**ENGINEERING MECHANICS (1)**	**Module Delivery**	
Module Type	**Core**	**Theory** **Lecture** **Tutorial**	
Module Code	**BCE111**		
ECTS Credits	**8**		
SWL (hr/sem)	**200**		

Module Level	UGI	**Semester of Delivery**	1
Administering Department	BCETD	**College**	**Polytechnic College - Karbala**
Module Lead er	**A.L. Ameer Zuhair**	**e-mail**	**ameer.mohammed.ikr@atu.edu.iq**
Module Leader's Acad. Title	**Assistant teacher**	**Module Leader's Qualification**	Assistant Lecture
Module Tutor	None	**e-mail**	None
Peer Reviewer Name		**e-mail**	
Review Committee Approval		**Version Number**	1.0

Relation With Other Modules
Relationship with other study subjects

Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents
Course objectives, learning outcomes, and guidance content

Module Aims Course Objectives	After successful completion of this course the student will be able to understand: **the manner of dealing with forces acting on bodies.** **2-the relation between the force and its components.** **3- the principle of moments & couples.** **4- Another purpose was to help the student to develop the logical , orderly processes of thinking which characterizes the engineer .** 1.

Module Learning Outcomes	• **The ability to convert units in various systems To understand and use the general ideas of force vectors and equilibrium ofparticle and rigid body.** • **To understand and use the general ideas of structural analysis and internalforce and friction.** • **To understand and use the general ideas of center of gravity, centroids andmoments of inertia.**
Indicative Contents Guideline Contents	**This course is provided to the engineering students with the basic skills in static and strength of materials. It provides a clear and thorough demonstration of the theory and application of engineering static and strength of materials. Among themain concepts that are covered in this course are vectors, equilibrium of a particle, equilibrium of a rigid body, trusses and frames, internal forces, centroids, and moment of inertia.**
Learning and Teaching Strategies	
Strategies	**In this course students are expected to:** • **Attend all classes. In the event you miss a class, you are responsible for the assignments and announcements made during your absence.** • **Participate actively in discussions and group exercises.** • **Prepare for class sessions by reading text assignments.** • **Attendance at all exams is required. Makeup exams will be given only in emergency cases (proof required). Vacation arrangements are not emergencies. Students who have unexcused absences will receive the grade of zero ("0") for all tests, quizzes, and/or lab experiments missed.** **Feel free to raise questions (even if you suspect you are the only one who does not know the answer) to ensure that you thoroughly understand and are able to apply the theory in real engineering applications.**

Delivery Plan (Weekly Syllabus) **Weekly theoretical curriculum**			
	Material Covered	**Teaching method**	**Evaluation Method**
Week	**Syllabus**		
1	**Definition of mechanics, general review of physics topics related to the subject, trigonometric ratios of angles, vector and non-vector quantities.**	**Lecture**	**Asking daily exam questions**

			(homework)
2&3	**Analysis and composition of forces, force triangle law and force polygon.**	**Discussion**	**homework)**
4	**Momentum of forces.**	**Lecture**	**daily quiz**
5	**Doublets.**	**Discussion**	**Practical exercise. Working groups.**
6&7	**Resultant of convergent, non-convergent and parallel forces.**	**Lecture**	**daily quiz**
8	**Widespread weights.**	**Discussion**	**daily quiz**
9&10	**Equilibrium, drawing a free body diagram, equilibrium equations, equilibrium in the case of convergent, non-convergent and parallel forces.**	**Lecture**	**Homework , daily quiz**
11	**Types of tributaries, types of supports, balance in tributaries.**	**Lecture**	**homework**
12&13	**Trusses, analysis of trusses using joints and sections.**	**Discussion**	**Homework , daily quiz**
14&15	**Friction, nature of friction, theory of friction, laws of friction, types of friction, general applications.**	**Lecture**	**homework**
Week 16	**Final Exam**		

Module Evaluation
Course Material Assessment

		Time/ Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10 % (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10 % (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10 % (10)	Continuous	
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	**Midterm Exam**	1.5 hr	10 % (10)	7	LO # 1-7
	Final Exam	3	50 % (50)	16	All
Total assessment			100% (100 Marks)		

Learning and Teaching Resources
Learning and teaching resources

	Text	**Available in the Library?**
Required Texts	1.Engineering Mechanics / FL Singer 2. Engineering Mechanics / A. Higdon & W. B. Stiles	Yes
Recommended Texts	1. Engineering Mechanics / Mclean & Nelson	No
Websites		

APPENDIX:

GRADING SCHEME Grade chart				
Group	Grade	**Appreciation**	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	**privilege**	90-100	Outstanding Performance
	B - Very Good	**very good**	80-89	Above average with some errors
	C - Good	**good**	70-79	Sound works with notable errors
	D - Satisfactory	**middle**	60-69	Fair but with major shortcomings
	E - Sufficient	**acceptable**	50-59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	**Accepted by decision**	(45-49)	More work required but credit awarded
	F – Fail	**Precipitate**	(0-44)	Considerable amount of work required
Note:				
NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

Course description

Module Information **Course Information**		
Module Title	**Engineering Drawing**	**Module Delivery**

Module Type	Core		**Theory Lecture Practical**	
Module Code	**BCE112**			
ECTS Credits	6			
SWL (hr/sem)	150			
Module Level	**1 UGI**	**Semester of Delivery**	1	
Administering Department	**BCETD**	**College**	**Polytechnic College - Karbala**	
Module Leader	**A.L. Muhammad Ali Aziz**	**e-mail**	**mohammed.azeez.ikr20@atu.edu.iq**	
Module Leader's Acad. Title	**Assistant Lecture**	**Module Leader's Qualification**	**None**	
Module Tutor	**None**	**e-mail**	**None**	
Peer Reviewer Name		**e-mail**		
Review Committee Approval		**Version Number**	**1.0**	

Relation With Other Modules **Relationship with other study subjects**			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents	
Module Aims **Course Objectives**	**Introducing the fundamentals of engineering drawing to the student so that he can be qualified to express his thoughts, draw & execute the projects related to civil engineering; As well as aims to:** **1- Assisting requester in experimenting and creating their design ideas in the two-dimensional environment of architectural drawing and design programs with the help of a computer.** **2-Take advantage of the technologies provided by AutoCAD to complete many graphic operations quickly and with greater accuracy and present them in a professional manner.** **3-Teaching the requester how to use the devices associated with the regular drawing programs, and training students to**

	import and export drawings to other compatible programs and how to integrate them with other information for engineering projects.
Module Learning Outcomes **Learning outcomes for the subject**	**1- Knowledge of commands and instructions in the AutoCAD program and how to use them correctly.** **2- The student's ability to understand and apply the basics of engineering drawing.** **3- Reading, disassembling and assembling geometric shapes through drawing and projection methods.** **4- Developing the student's skill in using the AutoCAD program in drawing engineering shapes.** **5- Developing the student's engineering imagination through deducing the projections and sections of each geometric solid and realizing its dimensions.**
Indicative Contents **Guideline Contents**	**Indicative content includes the following:** **6- Knowing the commands and directives and conducting auxiliary exercises to apply them in their correct form to increase his ability to absorb the material and to communicate with the most important ideas presented by the material through the Internet.** **7- Going to implement an engineering design with all its recognized requirements in the field of work, which reflects the skills through designing engineering plans that meet the details and dimensions that can be implemented on the ground.** **8- Applications for various engineering processes.** **9- Auxiliary exercises that the student presents by applying and delivering them as participatory work to increase his ability to absorb the material.** **10- Going to implement an engineering design with all its recognized requirements in the field of work, which reflect the skills through designing engineering plans that meet the details and dimensions that can be implemented on the ground.**
Learning and Teaching Strategies	
Strategies	**1- Students' awareness of concepts and basics in interior design.** **2- Applications for various engineering processes.** **3- Use different websites to learn more about engineering drawing.** **4- Training the student to read, disassemble, and assemble geometric shapes through the methods of drawing, projection,**

	and sections, and in this expansion of his geometric imagination, because he recognizes the hidden parts in each geometric figure. **5- Training the students to draw different geometric shapes and employing them in engineering painting, each in its appropriate location.** **6- Introducing the student to the basic principles of engineering, drawing parts and assembling them using projections. And all the necessary information to accurately describe the true shape of the desired object. In addition, engineering drawing is taught using the AutoCAD program.**

Delivery Plan (Weekly Syllabus)

Weekly theoretical curriculum

	Material Covered		
Week	Syllabus	**Teaching method**	**Evaluation Method**
1	Fundamentals of engineering drawing, tools used, board stabilization, types of lines, writing in engineering script	Lecture	Questions and Answers
2	,Geometric operations: bisecting a line segment bisecting an angle, joining a line segment to a circle .with an arc Connecting two straight lines with an arc, drawing an .equilateral triangle, a pentagon, a hexagon A straight line tangent to two circles, inside and outside; an arc tangent to two circles, inside and outside	discussion	Asking questions
3	Ellipse: An application for drawing geometric shapes .using basic geometric operations	Lecture	Listening Asking questions
4	Principles of projection, how to represent dimensions on a drawing, projection exercises	Dialogue and criticism	Case Study
5	Isometric perspective drawing	discussion	Case studies
6	Finding the missing projection with isometric perspective drawing	Discussion and	Mini-lesson discussion

		mini-lesson	
7	Sections	Role-playing discussion	Case Study
8	AutoCAD applications, redefining the relationship between AutoCAD software **2D)**) and three-dimensional**3D)** .drawings Open a new page in the program, define the drawing area**(Limits),** draw a frame for a chart and a data .table With the application of writing within the spreadsheet	a lecture discussion	Listening and asking questions
9	**(Text)**	Lecture and critique	Asking questions to listen
10	Understanding font types, how to obtain them, and .how to use them in AutoCAD By placing them in multiple layers**,** ,different colors and different**line weights.**	Lecture and critique	Asking questions work groups
11	,Drawing basic geometric shapes: triangles ;pentagons, hexagons, and polygons in general .ellipses ,Connect two straight lines with a circle sector connect two circles with an arc using the command **(circle Ttr).** Connect a straight line with a circle using an arc in the same way	Discussion and listening	work groups Mini-lesson
12	Drawing complex geometric shapes and mechanical parts (applications of engineering processes**)**	Dialogue and discussion	Practical exercise and working groups
13	Drawing projections of three-dimensional shapes and adding dimensions to them using multiple layers **.**	discussion	Asking questions
14	Find the missing projection and continue drawing the .projections	Discussion and	Asking questions

		listening	
15	Drawing the three-dimensional shape using the **(Isometric snap) method**	Lecture and critique	Case Study

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	**1- engineering drawing.** **Abdul Rasul Al-Khafaf**	**Yes**
Recommended Texts	**1-AutoCAD basics.** **Assistant teacher** **Ali Mahdi Muftin** **2- Basics of AutoCAD 2020.** **Ahmed Nizam Mohammed Shukr** **3- Computer-aided drawing.** **General Administration of Curriculum Design and Development.**	
Websites	**1- Mustafa Ali channel.** **2- Khaled Ibrahim Abu Hadid Channel.** **3- Graphic designer channel.** **4- Fundamentals of drawing in AutoCAD** **Eng. Amal**	

APPENDIX:

GRADING SCHEME

Group	Grade	Assesment	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	**privilege**	90 - 100	Outstanding Performance
	B - Very Good	**very good**	80-89	Above average with some errors
	C - Good	**good**	70-79	Sound works with notable errors
	D - Satisfactory	**middle**	60-69	Fair but with major shortcomings
	E - Sufficient	**acceptable**	50-59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	**Accepted by decision**	(45-49)	More work required but credit awarded
	F – Fail	**Precipitate**	(0-44)	Considerable amount of work required

Note:		
NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.		

Course description

Module Information Course Information					
Module Title	**Mathematics (1)**			**Module Delivery**	
Module Type	**Basic**			**Theory** **Lecture** **Tutorial**	
Module Code	**BCE113**				
ECTS Credits	**8**				
SWL (hr/sem)	**200**				
Module Level	1 UGI		**Semester of Delivery**	1	
Administering Department	BCETD		**College**	Polytechnic College - Karbala	
Module Leader	**M.M. Duaa Falah Rasoul**		**e-mail**	doaa.rasool.ikr16@atu.edu.iq	
Module Leader's Acad. Title	Lecture		**Module Leader's Qualification**		
Module Tutor	None		**e-mail**	None	
Peer Reviewer Name			**e-mail**		
Review Committee Approval			**Version Number**	1.0	

Relation With Other Modules **Relationship with other study subjects**			
Prerequisite module	None	Semester	
Co-requisites module	None	Semester	
Module Aims, Learning Outcomes and Indicative Contents **Course objectives, learning outcomes, and guidance content**			
Module Aims **Course Objectives**	1/Develop the ability of the student in using mathematics in engineering applications 2/After successful completion of this course the student will be able to understand: a/ Matrices. b/ Applications of infinite integration and finite integration. c/ Application of derivatives in mechanics. d/ Trigonometric functions. e/ Logarithmic and exponential functions.		

	f/ Integration. g/ Limits. h/ Slope of the straight line, Slope of the curve.
Module Learning Outcomes **Learning outcomes for the subject**	Students are able to: / Demonstrates knowledge of functions are and how they are pictured as graphs, how they are combined and transformed, and ways they can be classified. / Review the trigonometric functions, /Discuss inverse, exponential, and logarithmic functions. / Review the real number system, Cartesian coordinates, straight lines, circles, parabolas, and ellipses. Develop the limit. /Use limits to describe the way a function varies. Some functions vary continuously; /Discussed how to determine the slope of a curve at a point and how to measure the rate at which a function changes. /Develop rules for finding this derivative function easily, without having to calculate any limits directly. / Demonstrates knowledge of the derivative is one of the key ideas in calculus, and is used to study a wide range of problems in mathematics and science, / Review the one of the most important applications of the derivative is its use as a tool for finding the optimal (best) solutions to problems. /Use derivatives to find extreme values of functions, to determine and analyze the shapes of graphs, and to solve equations numerically. /Develop a method to calculate the areas and volumes of very general shapes. This method, called integration, is a way to calculate much more than areas and volumes. The definite integral is the key tool in calculator for defining and calculating many important quantities, such as areas, volumes, lengths of curved paths, probabilities, averages, energy consumption, /Study a number of important techniques which apply to finding integrals for specialized classes of functions such as trigonometric functions, products of certain functions, and rational functions. Since we cannot always find an antiderivative.

Indicative Contents **Guideline Contents**	
Learning and teaching strategies	
Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.

Module Evaluation
Course Material Assessment

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10 % (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	15 % (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1			
	Report	1	15% (10)	13	LO # 5, 8 and 10
Summative assessment	**Midterm Exam**	1.5 hr	10 % (10)	7	LO # 1-7
	Final Exam	3 hr	50 % (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
Weekly theoretical curriculum

	Material Covered		
Week	**Syllabus**	**Teaching method**	**Evaluation Method**
1	Matrices, determinants, their properties.		
2	Solving linear equations, Cramer's method , applications of determinants , solving power analysis equations.	Lecture Discussion	Listening and asking questions

3	Vectors, vector analysis, vector and scale quantities, vector algebra, vector arithmetic operations in space.	Lecture	Asking daily exam questions (homework)
4	Orthogonal vector unit, vector scale, scalar and cross product, applications of vectors, Calculation of moment applications, work.	Discussion	homework)
5	Function, trigonometric functions and trigonometric relationships, logarithmic function.	Lecture	daily quiz
6	Exponential function, hyperbolic functions , their applications.	Discussion	Practical exercise. Working groups.
7	Goals, the goal of algebraic and trigonometric functions , applications on the goal.	Lecture	daily quiz
8	Sequences.	Lecture	daily quiz
9	Differentiation, derivative, derivative of algebraic functions, chain rule.	Lecture	Homework, daily quiz
10	Curved functions higher order standard derivative.	Lecture	homework
11	Derivative of trigonometric functions , derivative of logarithmic functions.	Lecture	Homework, daily quiz
12	Derivative of exponential function, derivative of hyperbolic functions.	Lecture	Homework, daily quiz
13	Applications of derivative , tangent and normal equation , velocity, acceleration and magnification.		
14	Exponents and logarithms.	Lecture Discussion	Listening and asking questions
15	General physical and engineering applications, graphing functions.	Lecture	daily quiz
16	Final Exam		

Learning and Teaching Resources		
	Text	Available in the Library?

Required Texts	1. Calculus "Seven Edition" By H. Anton, I. Bivens, S. Davis 2. Calculus, By Thomas	Yes
Recommended Texts	2. Advanced Engineering Mathematics, By CR Wylie,	No
Websites		

APPENDIX:

GRADING SCHEME

Grade chart

Group	**Grade**	**Appreciation**	**Marks (%)**	**Definition**
Success Group (50 - 100)	A - Excellent	privilege	90-100	Outstanding Performance
	B - Very Good	very good	80-89	Above average with some errors
	C - Good	good	70-79	Sound works with notable errors
	D - Satisfactory	middle	60-69	Fair but with major shortcomings
	E - Sufficient	acceptable	50-59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	Accepted by decision	(45-49)	More work required but credit awarded
	F – Fail	Precipitate	(0-44)	Considerable amount of work required
Note:				

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

Course description

Module Information
Course Information

Module Title	**Human rights and democracy**	**Module Delivery**	
Module Type	**S**	☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☒ **Seminar**	
Module Code	**ATU13**		
ECTS Credits	**2**		
SWL (hr/sem)	**50**		
Module Level	1 UGI	**Semester of Delivery**	1
Administering Department	BCETD	**College**	Polytechnic College - Karbala
Module Leader	**A.L. Mustafa Ahmed Abdul Sahib**	**e-mail**	**Mustafa ahmd1411993@gmail.com**
Module Leader's Acad. Title	**Assistant Lecturer**	**Module Leader's Qualification**	
Module Tutor	Name (if available)	**e-mail**	Email
Peer Reviewer Name	Name	**e-mail**	Email
Scientific Committee Approval Date		**Version Number**	1.0

Relation with other Modules

Relationship with other study subjects

Prerequisite module		**Semester**	2
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents
Course objectives, learning outcomes, and guidance content

Module Objectives Course Objectives	1. The student learns about the principles and values of human rights 2. Defining and educating generations on democracy, respecting it, and adhering to it 3. Learn about public freedoms and the details of these freedoms
Module Learning Outcomes	(Through the methods previously mentioned regarding the role of institutions and mechanisms, the National Plan adopts some of the

Learning outcomes for the subject	methods previously applied by the Iraqi government, human rights organizations, and other organizations in their activities and programs that promote respect for human rights . It also adopts an integrated systematic approach in its coordination and organization to become more capable of working and achieving the desired results.)
Indicative Contents Guideline Contents	The plan adopts an implementation vision that relies on utilizing (various existing mechanisms in Iraq that are important for internal development and respect for human rights . Under the plan, a dedicated committee will be formed to monitor its implementation ,-without being bound by specific means or tools . Like any short medium-, or long-term plan, this plan requires the establishment of a broadly representative national committee (governmental and non-governmental). Actors are expected to follow up, coordinate , and open essential channels for participation to enhance the plan's effectiveness.

Learning and Teaching Strategies

Strategies	**With regard to aspects of the action plan and ongoing efforts to promote a culture of human rights in the country, the plan focuses primarily on the following steps in order:** **1. To identify and study previous efforts in spreading awareness and training in the field of human rights.** **2. The need to measure the effects of these efforts in order to ensure knowledge of the results and consequences.** **3. Review the approaches and analyses applied in these activities.** **4. Analyzing current and future needs and setting priorities.** **5. Developing a strategic vision regarding the methods and mechanisms for spreading awareness of human rights culture.** **6. Linking these efforts with other efforts related to preparing a national program for human rights education.** **7. Adopt an integrated human rights media strategy that promotes respect for human rights and citizenship and enhances public awareness of values.** **8. Continuous development and review of efforts to incorporate human rights into annual and subject-specific curricula**.

Student Workload (SWL)

.The student's academic workload is calculated for 15 weeks

Structured SWL (h/sem) **Regular academic workload for the student during the semester**	33	**Structured SWL (h/w)** **Student's regular weekly study load**	2.2
Unstructured SWL (h/sem) **Irregular student workload during the semester**	17	**Unstructured SWL (h/w)** **Irregular weekly study load for the student**	1.1

Total SWL (h/sem) **The student's total academic workload during the semester**	50

Module Evaluation

Course Material Assessment

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	**2**	**15% (15)**	**5 and 10**	**LO #1, #2 and #7, #8**
	Assignments	**2**	**15% (15)**	**2 and 12**	**LO #3, #4 and #6, #7**
	Projects / Lab.	**----**	**--**	**--**	**--**
	Report	**1**	**10% (10)**	**13**	**LO #5, #6 and #8**
Summative assessment	**Midterm Exam**	**2hr**	**10% (10)**	**7**	**LO #1 - #7**
	Final Exam	**3hr**	**50% (50)**	**16**	**All**
Total assessment			**100% (100 Marks)**		

Delivery Plan (Weekly Syllabus)

Weekly theoretical curriculum

	Material Covered
Week 1	Human rights: definition and objectives
Week 2	Human rights in ancient civilizations, especially the civilization of Mesopotamia
Week 3	Human rights in divine laws
Week 4	Human rights in Islam
Week 5	Non-governmental organizations and human rights (International Committee of (the Red Cross - Amnesty International
Week 6	.Human Rights Watch - Arab Human Rights Organizations
Week 7	Human Rights in Iraqi Constitutions: Between Theory and Reality - The Iraqi Constitution
Week 8	.The relationship between human rights and public freedoms
Week 9	Universal Declaration of Human Rights
Week 10	.Regional charters and national constitutions
Week 11	Modern human rights
Week 12	.Economic, social, and cultural human rights, and civil and political human rights

Week 13	Guarantees for respecting and protecting human rights at the national and .international levels
Week 14	The general theory of freedoms: the origin of rights and freedoms - the project's .position on declared rights and freedoms
Week 15	The role of non-governmental organizations in respecting and protecting human .rights
Week 16	Preparatory week before the final exam

Learning and Teaching Resources

Learning and teaching resources

	Text	Available in the Library?
Required Texts		**Yes**
Recommended Texts		**No**
Websites		

Grading Scheme

Grade chart

Group	Grade	Assessment	Marks %	Definition
Success Group (50 - 100)	**A -** Excellent	privilege	90-100	Outstanding Performance
	B - Very Good	very good	80-89	Above average with some errors
	C - Good	good	70-79	Sound works with notable errors
	D - Satisfactory	middle	60-69	Fair but with major shortcomings
	E - Sufficient	acceptable	50-59	Work meets minimum criteria
Fail Group (0 – 49)	**FX** – Fail	Sediment (under (processing	(45-49)	More work required but credit awarded
	F – Fail	Precipitate	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

Course description

Module Information Course Information					
Module Title	**English language (1)**			**Module Delivery**	
Module Type	**S**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☒ **Seminar**	
Module Code	**ATU10**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	UGx		**Semester of Delivery**	1	
Administering Department	BCETD		**College**	Polytechnic College - Karbala	
Module Leader	**Jafar Hassan Jassim Ajam**		**Email**	**jaafar.ejam@atu.edu.iq**	
Module Leader's Acad. Title	Assessment Lecture		**Module Leader's Qualification**		
Module Tutor	Name (if available)		**e-mail**	Email	
Peer Reviewer Name	Name		**e-mail**	Email	
Scientific Committee Approval Date			**Version Number**	1.0	

Relation with other Modules Relationship with other study subjects			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents Course objectives, learning outcomes, and guidance content	
Module Objectives Course Objectives	1-The aim of this course is to provide English learners with integrated language skills such as reading, listening and writing result in a level of basic language knowledge. 2-This course will focus on grammar rules, basic word knowledge and Usage, reading comprehension, reading out of the lesson, and

	Paragraph writing. 3- A student may be able to listen to native speakers and speak English Language. 4- A student may be able to write and have creativity in his writing.
Module Learning Outcomes Learning outcomes for the subject	1- Uses expressions of Quantity in elementary level of English. 2- Constructs sentences in Present Perfect Tense, Simple Future Tense and Going to Future Tense both in an oral and written task. 3- Defines basic modules and employs them at elementary level of communication and writing skills. 4- Translates sentences in elementary level from English to another language. 5- Interprets the texts written in elementary level of English.
Indicative Contents Guideline Contents	**Language** is a rule-governed behavior. It is defined as the comprehension and/or use of a spoken (ie, listening and speaking), written (ie, reading and writing), and/or **other communication symbol system** (eg, American Sign Language). **Spoken and written language** are composed of receptive (ie, listening and reading) and expressive (ie, speaking and writing) components. Spoken language, written language, and their associated components (ie, receptive and expressive) are each a synergistic system comprised of individual language domains (ie, phonology, morphology, syntax, semantics, pragmatics) that form a dynamic integrative whole **Phonology** study of the speech sound (ie, phoneme) system of a language, including the rules for combining and using phonemes. **Morphology** study of the rules that govern how morphemes, the minimal meaningful units of language, are used in a language. **Syntax** the rules that pertain to the ways in which words can be combined to form sentences in a language. **Semantics** the meaning of words and combinations of words in a language.

Learning and Teaching Strategies Learning and teaching strategies	
Strategies	1- Uses the available material to increase its efficiency. 2- Constructs sentences in Present Perfect Tense, Simple Future Tense and Going to Future Tense both in an oral and written task. 3-Defines basic modules and employs them at elementary level of communication and writing skills. 4- Develop and enhance students' language skills to communicate in English properly.

	5- Interprets the texts written in elementary level of English.

Student Workload (SWL) .The student's academic workload is calculated for 15 weeks			
Structured SWL (h/sem) Regular academic workload for the student during the semester	33	**Structured SWL (h/w)** **Student's regular weekly study load**	2.2
Unstructured SWL (h/sem) Irregular student workload during the semester	17	**Unstructured SWL (h/w)** **Irregular weekly study load for the student**	1.1
Total SWL (h/sem) The student's total academic workload during the semester	50		

Module Evaluation Course Material Assessment					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Evaluation Method	**Teaching method**	Weekly theoretica	**Delivery Plan (Weekly Syllabus)**

		l curriculu m	
Theoretical lecture	Daily tests and oral questions	Week 1	Hello!
Theoretical lecture	Daily tests and oral questions	Week 2-3	WB unit 1 / Your world
Theoretical lecture	Daily tests and oral questions	Week 4-5	WB unit 2 / All about you
Theoretical lecture	Daily tests and oral questions	Week 6-7-8	WB unit 3/Family & friends/WB unit 4
Theoretical lecture	Daily tests and oral questions	Week 9	The way I live
Theoretical lecture	Daily tests and oral questions	Week 10	WB unit 5
Theoretical lecture	Daily tests and oral questions	Week 11-12	Every day / WB unit 6
Theoretical lecture	Daily tests and oral questions	Week 13	My favorites
Theoretical lecture	Daily tests and oral questions	Week 14	WB unit 7
Theoretical lecture	Daily tests and oral questions	Week 15	Where I live / WB unit 8

Theoretical lecture	Daily tests and oral questions	Week 16	Preparatory week before the final exam

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	Headway book for learning English	Yes
Recommended Texts	Skills in writing and learning English	Yes
Websites	https://www.bbc.co.uk/learningenglish/	

Grading Scheme
Grade chart

Group	**Grade**	Appreciation	**Marks %**	**Definition**
Success Group (50 - 100)	**A -** Excellent	privilege	90 - 100	Outstanding Performance
	B - Very Good	very good	80 - 89	Above average with some errors
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Fail Group (0 – 49)	**FX** – Fail	Sediment (under (processing	(45-49)	More work required but credit awarded
	F – Fail	Precipitate	(0-44)	Considerable amount of work required

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Course description

Module Information Course Information					
Module Title	**Arabic**			**Module Delivery**	
Module Type	**S**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☒ **Seminar**	
Module Code	**ATU11**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	UG x1		**Semester of Delivery**	1	
Administering Department	BCETD	**College**	Polytechnic College - Karbala		
Module Leader	**Athmar Hamza Turki**	**e-mail**	**athmar.turki.4@atu.edu.iq**		
Module Leader's Acad. Title	Assessment Lecture	**Module Leader's Qualification**			
Module Tutor	Name (if available)	**e-mail**	Email		
Peer Reviewer Name	Name	**e-mail**	Email		
Scientific Committee Approval Date		**Version Number**	1.0		

Relation with other Modules Relationship with other study subjects			
Prerequisite module	**None**	**Semester**	
Co-requisites module	**None**	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents Course objectives, learning outcomes, and guidance content	
Module Objectives Course Objectives	1. To enable students to speak in standard Arabic. 2. Enabling students to read correctly through vocabulary formation. 3. To enable students to acquire the necessary knowledge of the Arab heritage of prose, poetry and other writings. 4. Enabling students to pronounce words correctly.

	5. Enabling students to use Arabic language terminology according to their specializations. 6. Enabling students to write in correct language, free from spelling errors.
Module Learning Outcomes Learning outcomes for the subject	أ- :Cognitive objectives A1. Knowledge and understanding of the linguistic and grammatical .rules and the articulation points of words in the Arabic language A2. Knowledge and understanding of common linguistic and literary .expression styles in the Arabic language and analysis of its texts ,A3. To know the most famous ancient and modern writers, thinkers and linguists in the Arabic language heritage and to understand their .most important literary and intellectual output A4. Knowledge and understanding of the most important modern teaching methods and techniques, in addition to the most important assessment, evaluation, and language tests used in assessing and .teaching the Arabic language b) Program-specific skill objectives .B1- Students practice basic language skills B2- Training students to develop their speaking and listening skills so that they are able to deal with situations B3 - Providing students with reading skills and strategies and training them in them, such as the mechanics of reading, reading .techniques and vocabulary use skills B4 - Developing students' abilities in writing skills for research and . reports, such as citing facts
Indicative Contents Guideline Contents	:**Arabic is taught at several levels** 1- The grammatical level: This is the level through which the .syntactic meaning of the text can be known 2- The morphological level is the level through which the meaning branching off from the lexical meaning can be .known 3- The semantic level: This is the level through which the .meaning of words (the root) can be known 4- ,The phonetic level: This is the level that studies letters movements, and phonetic syllables, whether they are a word .or part of a word

Learning and Teaching Strategies Learning and teaching strategies	
Strategies	1- Education through breaking down and classifying Arabic vocabulary according to its themes; to enable the student to distinguish between them Learning through the pattern, whether it is the visual pattern (verbal) or the sensory pattern (kinesthetic) , to explain the verbal meanings .and contextual meanings

	Teaching using micro-lessons , where the scientific curriculum is .3 divided into main ideas and then taught to The student attends consecutive lectures, and each lecture deals with .only one idea Cooperative learning / where assignments are given and divided 4 - among students in small groups and a problem is presented Specific to them and to give students the opportunity to solve this .problem by cooperating with each other

Student Workload (SWL) .The student's academic workload is calculated for 15 weeks			
Structured SWL (h/sem) Regular academic workload for the student during the semester	33	**Structured SWL (h/w)** **Student's regular weekly study load**	2.2
Unstructured SWL (h/sem) Irregular student workload during the semester	17	**Unstructured SWL (h/w)** **Irregular weekly study load for the student**	1.1
Total SWL (h/sem) The student's total academic workload during the semester	**50**		

Module Evaluation

Course Material Assessment

As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Evaluation Method	Teaching method	Week	Delivery Plan (Weekly Syllabus)
Theoretical lecture	Daily tests and oral questions	Week 1+2	Arabic literature
Theoretical lecture	Daily tests and oral questions	Week 3+4	, Morphology (Morphological scale Plurals in Arabic , Verb conjugation (with pronouns
Theoretical lecture	Daily tests and oral questions	Week 5-7	Verb conjugation in terms of (health and illness , definiteness and (augmentation , derivatives
Theoretical lecture	Daily tests and oral questions	Week 8	alphabet (Solar and lunar)
Theoretical lecture	Daily tests and oral questions	Week 9	Rules for writing punctuation marks
Theoretical lecture	Daily tests and oral questions	Week 10+11	,Rules for writing the hamza (first middle, and final , and the hamzas of (connection and separation
Theoretical lecture	Daily tests and oral questions	Week 12+13	, Arabic dictionaries (Persian schools meanings of foreign words in the (Holy Quran
Theoretical lecture	Daily tests and oral questions	Week 14	The curriculum of my school (Al Ain and (Al Asas), and the practice of (extracting words
Theoretical lecture	Daily tests and oral questions	Week 15	Common linguistic errors
Theoretical lecture	Daily tests and oral questions	Week 16	End-of-term exam

Learning and Teaching Resources

Learning and teaching resources

	General Arabic Language for Non-Specialized) • authored by Abdul Qadir Hassan , (Departments . Amin and others Abdo by , University Arabic for Non-Specialists • .**Rajhi** -Al (Clear Grammar in Arabic Language Rules) • . Written by Ali Al-Jarim and Mustafa Amin other books that focus on making the Arabic • ... language easier for non-specialists	**Available in the Library?**
Required Texts		Yes
Recommended Texts	Skills in writing and learning English	Yes
Websites	https://www.bbc.co.uk/learningenglish/	

Grading Scheme

Grade chart

Group	Grade	Appreciation	Marks %	Definition
Success Group (50 - 100)	**A -** Excellent	privilege	90 - 100	Outstanding Performance
	B - Very Good	very good	80 - 89	Above average with some errors
	C - Good	good	70 - 79	Sound works with notable errors
	D - Satisfactory	middle	60-69	Fair but with major shortcomings
	E - Sufficient	acceptable	50-59	Work meets minimum criteria
Fail Group (0 – 49)	**FX** – Fail	Sediment (under (processing	(45-49)	More work required but credit awarded
	F – Fail	Precipitate	(0-44)	Considerable amount of work required

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

Course description

Module Information Course Information					
Module Title	**coefficient**			**Module Delivery**	
Module Type	**Supplement**			**Theory** **Lab** **Tutorial**	
Module Code	**BCE114**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	UG x11 UGI		**Semester of Delivery**	1	
Administering Department	BCETD		**College**	Polytechnic College - Karbala	
Module Leader	**Abdul Khader Aziz . Mutashar**		**e-mail**	**Abdulkadir Aziz Mutasher**	
Module Leader's Acad. Title	**assistant professor**		**Module Leader's Qualification**		
Module Tutor	None		**e-mail**		
Peer Reviewer Name			**e-mail**		
Review Committee Approval			**Version Number**	1.0	

Relation With Other Modules Relationship with other study subjects			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents Course objectives, learning outcomes, and guidance content	
Module Aims Course Objectives	Course objectives Acquiring manual skills in using hand tools, measuring instruments, and operating machinery necessary to prepare the student as a technician in the field of construction and Construction
Module Learning Outcomes	.1- **Demonstrate a comprehensive understanding of the basic concepts and principles of electronics, including measuring instruments, soldering techniques, and electroniccomponents.**

Learning outcomes for the subject	**.2- Applying knowledge and skills in performing welding operations accurately and adhering to safety guidelines inthe electronics workshop.** **.3- Building and analyzing various electronic circuits, including resistive, capacitive and semiconductor circuits, using appropriate tools andmaterials .** Evaluating, troubleshooting, and repairing electronic circuits. identifying faults, and applying effective problem-solvingmethods . .5- Developing proficiency in reading and interpreting electronic boards, designingand assembling circuits, and effectively communicating ideas and results related to electronics.
Indicative Contents Guideline Contents	Electronics Workshop: Acquiring practical skills in . electronics, including the use of measuring devices, soldering techniques, and working with electronic components. Mechanical Engineering Workshop: Developing knowledge . and practical skills in mechanical engineering, including working with different tools, understanding mechanical operations systems, and performing various mechanical.
Strategies	The main strategy used in teaching this unit is to encourage student participation in exercises, while refining and expanding their critical thinking skills. This is achieved through classrooms, interactive lessons, and demonstrating how building elements are subjected to external loads. This can be achieved through films or videos, or through ready-made building programs.

Student Workload (SWL)

Student's academic workload

Structured SWL (hr/ sem) (SSWL) Regular academic workload for the student during the semester	33	**Structured SWL (h/w)** Student's regular weekly study load	33/15 = 2.2
Unstructured SWL (hr/ sem)(USSWL) Irregular student workload during the semester	17	**Unstructured SWL (h/w)** Irregular weekly study load for the student	17/15 = 1.1
Total SWL (hr/ sem)	50		

The student's total academic workload during the semester	

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Evaluation Method	Teaching method		Delivery Plan (Weekly Syllabus)
			Material Covered
discussion	Asking questions	**Week**	**Syllabus**
Lecture	Listening Asking questions	**1**	• Industrial safety: General rules for accident prevention, healthcare equipment and how to use it
Dialogue and criticism	Case Study	**2-3**	• Carpentry: Basic principles of model carpentry and the use of hand tools (cutting .(saw, hole saw, hammer, planer, trap, file
discussion	Case studies	**4-5**	• .Using a band saw, disc saw, planer, or press
Discussion and mini-lesson	Mini-lesson discussion	**6-7**	• File making: Training the student in file making work and the use of measuring tools ,and files, automatic sawing machines .grooving and drilling
Role-playing discussion	Case Study	**8-9**	• Turning: Using different lathes, turning operations (plane, internal tapered, making .(different teeth

a lecture discussio n	Listening and asking questions	**10**	• Plumbing: Industrial safety in casting, molds and mold forming and steps of work in .casting
Lecture and critique	Asking questions to listen	**11-12-13**	• Welding: A. Occupational safety and security precautions**.** • B. Tools used and industrial safety equipment**.** • C. Types of welding (gas welding, ultrasonic welding, pressure welding, electric arc (welding**.**
Lecture and critique	Asking questions work groups	**14**	• Metal cutting and bending: Devices and machines used in cutting and bending metal sheets and reinforcing steel bars**.**
Discussio n and listening	work groups Mini-lesson	**15**	• Sheet metal work: Training the student on the rolling machine and the sheet metal marking process

Learning and Teaching Resources

Learning and teaching resources

	Text	Available in the Library?
Required Texts	.1 Digital principles and applications, by Albert Paul Malvino, 2nd Edition.¬ .2 Digital Logic Circuits by DAGodse APGodse, Technical Publications 2008	Yes
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Websites		

APPENDIX:

GRADING SCHEME

Grade chart

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