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

Al-Kitab University/College of Engineering

Unmanned Aircraft Systems Engineering Department

Description of Academic Program

(English Version)

Academic Year 2024-2025

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 Specification Form for the Academic Year 2024-2025

University Name: - Al-Kitab
College Name: College of Engineering
Department Name: Unmanned Aircraft Systems Engineering
Program Title: Bachelor of Science in Unmanned Aircraft Systems Engineering
Academic System: Bologna Process
Description Preparation Date: 10/4/2025
Date of Form Completion: 10/4/2025

Dean's Name
Prof. Dr. Sabah mohammed
Date: 10/ 4 / 2025
Signature:

Dean's Assistant for Scientific Affairs
Dr. Salim Yahya Kasim
Date: 10/ 4 / 2025
Signature:

Head of Department's Name
Dr. Hindren Ali Saber
Date: 10/ 4 / 2025
Signature:

Department of Quality Assurance and University Performance
The College Quality Assurance and University Performance Manager
Name:
Date: 10/ 4 / 2025
Signature:

1. Program Vision

Our vision for the Department of Unmanned Aircraft Systems Engineering is for it to be known as a future leader in the field of petroleum engineering, and for it to be among the ranks of engineering educational institutions recognized in the Arab world and internationally that are distinguished by teaching innovative educational programs and producing solid scientific research that serves diverse segments of society through graduates who possess high skills capable of communication. Dealing with society and its development prospects.

2. Program Mission

The mission of the Department of Unmanned Aircraft Systems Engineering, College of Engineering at Al-Kitab University, is to direct and adapt all its resources to achieve excellence in education and research, and to contribute to improving infrastructure throughout Iraq and providing engineering services in petroleum operations.

This message includes the basic elements in improving engineering performance, including education, scientific research, continuing education, community service, qualifying professional competencies in engineering sciences, and contributing effectively to scientific research and community service, through a stimulating environment to acquire, disseminate and produce knowledge in engineering, and optimal employment of cadres.

3. Program Objectives

This program aims to provide high-quality education to students in this branch of engineering and adequately prepare them to meet the current challenges in their profession and be able to deal with them in the future. Upon graduation, students acquire sufficient skills in critical thinking, problem solving, and communication to achieve a successful career. Their background will provide them with the opportunity to easily pursue postgraduate programmes, enabling them to take on a future role in teaching and research, if they so choose. During their studies, they will develop a spirit of teamwork and understand the desire to follow professional ethics in order to effectively serve society.

4. Program Accreditation

5. Other external influences

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	4	4	2.35	
College Requirements	6	71	41.76	
Department Requirements	28	95	55.88	
Summer Training	1			
Other				

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

7. Program Description

First Year (Bologna system)		First Semester				Second Semester			
Cod	Subject Title	ECTS	The.	Tut.	Lab.	ECTS	The.	Tut.	Lab.
UOKTB6UA101	Mathematics I	6.00	2	2	0	-	-	-	-
UOKTB6UA102	Physics I	5.00	3	0	2				
UOKTB6UA103	Engineering Mechanics I	5.00	2	0	2	-	-	-	-
UOKTB6UA104	Fundamentals of Electrical Engineering I	4.00	1	0	2	-	-	-	-
UOKTB6UA105	Engineering Drawing (AutoCAD)	4.00	4	0	0	-	-	-	-
UOKTB6UA106	Democracy and Human Rights	2.00	2	0	0	-	-	-	-
UOKTB6UA107	Workshops I	4.00	2	0	0	-	-	-	-
UOKTB6UA201	Mathematics II	-	-	-	-	6.00	2	2	0
UOKTB6UA202	Physics II	-	-	-	-	7.00	3	0	2
UOKTB6UA203	Engineering Mechanics II	-	-	-	-	3.00	2	2	0
UOKTB6UA204	Fundamentals of Electrical Engineering II	-	-	-	-	5.00	2	2	0
UOKTB6UA205	Computer	-	-	-	-	4.00	2	0	2
UOKTB6UA206	English Language					3.00	0	0	2
UOKTB6UA207	Workshops II	-	-	-	-	2.00	2	0	0
Total		**30**	**30**	**2**	**6**	**30**	**13**	**6**	**6**

Second Year (Bologna system)		First Semester				Second Semester			
Cod	Subject Title	ECTS	Weekly Hours			ECTS	Weekly Hours		
			The.	Tut.	Lab.		The.	Tut.	Lab.
UOKTB6UA301	Advanced Mathematics I	6.00	4	0	0	-	-	-	-
UOKTB6UA302	Aerodynamic I	5.00	2	0	2				
UOKTB6UA303	Strength of Materials	5.00	2	1	2	-	-	-	-
UOKTB6UA304	Electrical and Electronic Circuits	5.00	2	1	2	-	-	-	-
UOKTB6UA305	Computer Programming	4.00	2	0	2	-	-	-	-
UOKTB6UA30	Scientific Englis	3.00	2	0	0	-	-	-	-
UOKTB001	Crimes of the Baath Regime in Iraq	2.00	2	0	0	-	-	-	-
UOKTB6UA401	Advanced Mathematics II	-	-	-	-	6.00	4	0	0
UOKTB6UA402	Aerodynamic II	-	-	-	-	5.00	2	0	2
UOKTB6UA403	Arabic language	-	-	-	-	2.00	2	0	0
UOKTB6UA404	Composite materials	-	-	-	-	4.00	2	1	0
UOKTB6UA405	Digital Electronics	-	-	-	-	4.00	2	0	2
UOKTB6UA406	Measurements and Instrumentations					4.00	2	0	2
UOKTB6UA407	Sport	-	-	-	-	2.00	2	0	0
UOKTB6UA408	Theory of Machines					5.00	2	1	2
Total		30	16	2	8	32	18	2	8

8. Expected learning outcomes of the program

Knowledge

It is the ability to remember, retrieve and repeat information without changing anything, such as knowing specific facts. Knowledge of specific events, dates, people, characteristics, technical and scientific terms	Mention, identify, identify, write, describe, identify, arrange, organize, record, enumerate, name…etc.

Skills

It means the skills that form and grow in the student during the teaching and learning processes, and which show the nature of his dealings with his colleagues and teachers, such as personal skills and responsibility, communication and information technology skills, numerical skills, and the skill of cooperating with others in an atmosphere of friendliness and understanding, and this is done through Working in groups as a team in the laboratory, or by taking scientific trips in the surrounding environment to visit factories, science museums, or public libraries. Examples of these skills include communication skills and the skills of applying knowledge in new situations, or what are known as transferable skills.	A– General and transferable skills. B– Skills related to the subject. T– Skills. D– Mentality and mentality.
Learning Outcomes 3	Learning Outcomes Statement 3

Ethics	
Taking responsibility for learning and self-development in university studies.	Taking responsibility for learning and self-development in university studies.
Demonstrate self-confidence and leadership ability.	Demonstrate self-confidence and leadership ability.

9. Teaching and Learning Strategies

Since its establishment in 2024, the Department of Unmanned Aircraft Systems Engineering, College of Engineering, has been making strategic plans in the fields of education, scientific research, community service and development, as well as in the field of performance development. The department is no longer just a place where the student receives cognitive experiences, but university study has become the effective medium for developing the student's personality comprehensively and preparing him engineeringly for the life of society. Therefore, students are subjected to various activities that prepare them to be effective in society for its development and progress.

First: The Petroleum Engineering Department's education strategy:
1. Implementing relevant regulations and laws.
2. Activating the academic advising system.
3. Working to attract students
4. Working to achieve quality standards and quality assurance.
5. Activating the continuing education system.
6. Providing student support in all fields.
7. Increase student activities.
8. Shifting towards e-learning and smart education.
9. Updating educational programs in line with the needs of the labor market.
10. Description of programs and courses in accordance with academic standards.
11. Providing technological means to support education.
  12. Preparing the infrastructure, laboratories and classrooms to match the standard standards to ensure the quality of education.
13. Training faculty members and their assistants on how to use modern methods of education.
14. Encouraging students to take responsibility for their studies and complete their academic education.

Second: The strategy of the Petroleum Engineering Department in the areas of scientific research

1- Strategic development of scientific research related to the college's strategy.
2- Apply the research strategy and work to solve any obstacles.
3- Organizing scientific seminars with the aim of scientific communication, deepening concepts, and raising the engineering level.

4- Activating joint research between corresponding departments and colleges.

5- Working to bring local, regional and international research projects.

6- Concluding engineering and scientific agreements with corresponding bodies and institutions at the local and global levels with the aim of exchanging experiences and conducting research related to various specializations.

7- Support distinguished research.

8- Working to market scientific research.

9- Benefiting from scientific research to support the educational process and serve society.

10- Preparing the infrastructure and providing the necessary equipment and tools for scientific research.

11- Benefiting from scholarships and scholarships in conducting advanced research.

12- Disseminating the ethics of scientific research.

13- Training faculty members and their assistants on modern scientific research methods.

14- Participation in conferences, seminars and workshops related to scientific research.

15- Stimulating publication in peer-reviewed scientific journals with solid indicators of impact.

10. Evaluation methods

1. Regular attendance in class according to the schedule.

2. Skills in the classroom.

3. Homework.

4. Tests.

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Lecturer	Mechanics and mechatronics	Thermal power			Staff	
Assistant lecturer	mathematics	Numerical Analysis			Staff	

Lecturer	Applied mechanics	Vibrations			**Staff**	
Assistant lecturer	Electric and computer engineering	Electric power engineering			**Staff**	
Assistant Teacher	Agricultural machinery and equipment	Agricultural machinery and equipment			**Staff**	
Professor	Engineering mechanics	Applied mechanics			**Staff**	
Assistant Teacher	Control and Systems Engineering	Control engineering			**Staff**	
Lecturer	Engineering mechanics	Thermofluids			**Staff**	
Assistant lecturer	English language	English language			**Staff**	
Assistant Professor	Engineering mechanics	Mechatronics Engineering				**Lecturer**

Professional Development

Mentoring new faculty members

1. Gain the necessary skills to build and develop the course.

2. It is provided with new teaching methods appropriate for the university stage.

3. Improves the level of performance in the field of teaching.

4. It helps to evaluate past and current teaching performance in an objective manner.

5. Provides key knowledge related to different learning theories.

6. Develops students' assessment skills.

7. Gain skills in ways to motivate students to learn.

8. Develops the skill of managing dialogue.

9. It provides the necessary skills to develop students' different thinking skills.

10. Improves the efficiency of methods related to guiding and counseling students.

11. Develops time management skills.

Professional development of faculty members

1- The field of teaching: The development of a faculty member in his teaching performance depends on the extent of his readiness for the teaching process, as he must have professional, personal and social components, in addition to the availability of scientific components, as he is conversant and proficient in his specialty, and familiar with

the best appropriate methods that achieve the goals. The desired goals that suit the nature and characteristics of the students.

2- The field of scientific research: The development of research expertise among faculty members is represented in the following: knowledge of methods for managing scientific research projects, techniques and methods for writing research articles, ways to improve the performance of the research team, methods for scientific supervision and joint supervision, research, design and application skills, and carrying out research operations. Research and statistical analysis through the computer, upgrading research skills and linking them to societal issues, and ways to obtain research grants and how to benefit from them.

3- The field of technology: Educational technology emphasizes the importance of the teacher or faculty member following the systems method in teaching. His task is no longer limited to explaining, delivering, and following traditional methods of teaching. Rather, his responsibility has become to draw a plan for the lesson strategy, so different and appropriate teaching methods and educational means are used. In order to achieve the desired goals.

4- The field of community service: It is all the activities and services that universities provide to non-employees, whether they are students, faculty members, or members of community groups and institutions. This includes all the training courses, consultations, scientific research, and educational programs they provide to serve the people of society. .

12.	**Acceptance Criterion**
Central admission	

13.	**The most important sources of information about the program**
nothing	

14.	Program Development Plan
1- Periodic evaluation and review of the program and the resulting recommendations or proposals specific to the program, based on the annual reports of the programs and course reports.	

٢- Opinions of the program advisory committee, if any, regarding approving the development and modification of the program.

٣- Developments that have occurred in the field of the program in scientific and technical aspects, as well as recommendations for research and studies.

٤- Labor market variables, available jobs and their requirements.

٥- Recommending the university or any institutions outside it to develop existing programs.

٦- Results of opinion polls for beneficiaries of university graduates.

٧- National development requirements.

٨- Academic accreditation requirements at the national and international levels.

٩- The requirements of the Iraqi framework after five years or more have passed since the implementation of the study plan and the completion of the feedback.

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
First year / level one	UOKTB6UA101	Mathematics I	Basic	√	√	√		√	√			√	√	√	
	UOKTB6UA102	Physics I	Basic	√	√	√		√	√	√			√	√	
	UOKTB6UA103	Engineering Mechanics I	Core	√	√	√		√	√	√		√	√	√	
	UOKTB6UA104	Fundamentals of Electrical Engineering I	Core	√	√	√		√	√	√	√	√	√	√	
	UOKTB6UA105	Engineering Drawing (AutoCAD)	Supportive	√	√	√		√	√	√	√	√	√	√	
	UOKTB6UA106	Democracy and Human Rights	Supportive	√	√	√		√	√	√		√	√	√	
	UOKTB6UA107	Workshops I	Supportive	√	√	√	√	√	√	√		√	√	√	
	UOKTB6UA201	Mathematics II	Supportive	√	√	√	√	√	√	√	√	√	√	√	
	UOKTB6UA202	Physics II	Basic	√	√	√	√	√	√	√		√	√	√	
	UOKTB6UA203	Engineering Mechanics II	Core	√	√	√		√	√	√		√	√	√	
	UOKTB6UA204	Fundamentals of Electrical Engineering II	Core	√	√	√		√	√	√		√	√	√	

Course Code	Course Name	Basic or optional	A1	A2	A3	A4	A1	A2	A3	A4	A1	A2	A3	A4
UOKTB6UA205	Computer Science I	Basic	√	√	√		√					√		
UOKTB6UA206	English Language I	Supportive	√	√	√		√					√		
UOKTB6UA207	Workshops II	Supportive	√	√	√		√					√		

Program Skills Outline															
				Required program Learning outcomes											
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	A1	A2	A3	A4	A1	A2	A3	A4
Second Year / Second Leve	UOKTB6UA301	Advanced Mathematics I	Basic	√	√	√		√				√	√	√	
	UOKTB6UA302	Aerodynamic I	Core	√	√	√		√	√			√	√		
	UOKTB6UA303	Strength of Materials	Core	√	√	√		√	√	√	√	√	√	√	
	UOKTB6UA304	Electrical and Electronic Circuits	Core	√	√	√		√	√	√	√	√	√	√	
	UOKTB6UA305	Computer Programming	Supportive	√	√	√		√	√	√	√	√	√	√	

Code	Course	Type												
UOKTB6UA30	Scientific English	Basic	√	√	√		√	√	√		√	√	√	
UOKTB001	Crimes of the Baath Regime in Iraq	Supportive	√	√	√	√	√	√	√		√	√	√	
UOKTB6UA401	Advanced Mathematics II	Basic	√	√	√	√	√	√	√	√	√	√	√	
UOKTB6UA402	Aerodynamic II	Core	√	√	√	√	√	√	√		√	√	√	
UOKTB6UA403	Arabic language	Basic	√	√	√		√	√	√		√	√	√	
UOKTB6UA404	Composite Materials	Core	√	√	√		√	√	√		√	√	√	
UOKTB6UA405	Digital Electronics	Core	√	√	√		√	√	√		√	√	√	
UOKTB6UA406	Measurements and Instrumentations	Core	√	√	√		√	√			√	√		
UOKTB6UA407	Sports	Supportive	√	√	√		√	√			√	√		
UOKTB6UA408	Theory of Machines	Core	√	√	√	√	√	√	√		√	√		

Module Information			
معلومات المادة الدراسية			

Module Title	Mathematics I	Module Delivery	
Module Type	Basic	☒ Theory ☐ Lecture ☐ Lab ☒ Tutorial ☐ Practical ☐ Seminar	
Module Code	UOKTB6UA101		
ECTS Credits	6		
SWL (hr/sem)	150		

Module Level	1	Semester of Delivery	1
Administering Department	Unmanned Aircraft Systems Engineering	College	College of Engineering
Module Leader		e-mail	E-mail
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	PHD
Module Tutor	2	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	2025	Version Number	1.0

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	

Module Aims أهداف المادة الدراسية	1- Developing and strengthening students' problem-solving skills. In particular, students 2- Teaching them to read, write, speak, and think in the language of mathematics. 3- Learning how to apply calculus tools to a variety of problem situations.
Module Learning Outcomes	1- Developing and strengthening students' problem-solving skills. In particular, students 2- Teaching them to read, write, speak, and think in the language of mathematics.

مخرجات التعلم للمادة الدراسية	3- Learning how to apply calculus tools to a variety of problem situations.
Indicative Contents المحتويات الإرشادية	• The area of mathematics known as calculus is primarily concerned with limits, functions, derivatives, trigonometric functions, and infinite series. An important component of modern mathematics education in this subject. Using derivatives to solve related rates problems • Using derivatives to approximate points (linearization) • Evaluating limits using L'Hopital's law • Locating critical points using the first derivative • Identifying increasing/decreasing values using the first derivative • Locating critical points using the second derivative • Identifying concavity and inflection points using the second derivative • Using the first/second derivative tests to find local and global extrema • Using derivatives to solve optimization problems

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	• Give emphasis on conceptual understanding. • Set challenging homework that expands on what you learned in class. • Cooperative learning techniques should be used. • Ask thoughtful questions. • Concentrate on logical thinking and actual problem-solving. • Use a variety of assessment methods.

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ٥١ أسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	75	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	72	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation

تقييم المادة الدراسية

		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 /	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	**Midterm Exam**	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Exponential and logarithm functions
Week 2	Application of Exponential and logarithm functions
Week 3	The relationship between the Exponential function and the logarithm function
Week 4	Trigonometric functions
Week 5	The inverse of Trigonometric functions
Week 6	Hyperbolic functions
Week 7	The inverse of Hyperbolic functions
Week 8	Derivative
Week 9	Implicit differentiation Exponential functions derivative
Week 10	Maximum and Minimum using Derivatives
Week 11	The logarithm functions derivative
Week 12	Derivative of hyperbolic functions
Week 13	Applications of differentiation
Week 14	Increasing and decreasing functions
Week 15	**Preparatory week before the final Exam**
Week 16	**Preparatory week before the final Exam**

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	**Available in the Library?**

Required Texts	George B. Thomas, "THOMAS' CALCULUS ", Eleventh Edition 2011, Dorling Kindersley (India). • Murry R. Spiegel," Mathematical Handbook of formulas and tables",1968.	
Recommended Texts	• 2-Ford , S.R. and Ford , J.R. " Calculus " , (1963) McGraw-Hill. • 3-K.Back house and S.P.T. Houldsworth " Pure Mathematics a First Course " (1979) , S1 Edition , Longman Group .	
Websites	• https://tutorial.math.lamar.edu/classes/calci/calci.aspx • https://learn.saylor.org/course/MA005	

Grading Scheme
مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(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.

Module Information
معلومات المادة الدراسية

Module Title	Computer Science I	Module Delivery
Module Type	**Support or related learning activity**	☒ **Theory**
Module Code	**UOKTB6UA205**	☐ **Lecture**
ECTS Credits	**3**	☒ **Lab**

SWL (hr/sem)	75		☐ Tutorial
			☐ Practical
			☐ Seminar

Module Level	1	Semester of Delivery	2
Administering Department	Unmanned Aircraft Systems Engineering	College	College of Engineering
Module Leader		e-mail	
Module Leader's Acad. Title	Asst. Professor	Module Leader's Qualification	Ph.D.
Module Tutor	NA	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	2025	Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	is an inevitable part of commerce education. The course is aiming to equip all the commerce aspirants to have basic skills as well as hands on experience on word processing, for creating excel spreadsheets, for building databases through the use of Microsoft Office Word, Excel, and VBA .
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- To familiarize students with the use of Microsoft Word 2- To familiarize students with the use of MS Excel 3- To familiarize students with the use of Excel Visual basic application

Indicative Contents المحتويات الإرشادية	Indicative content includes the following: Part I: fundamentals of Microsoft word In Part 1 we will provide students with the skills to create documents using Microsoft Word. It will also provide knowledge of how to create your own document for work, college, or home. Students will learn the basics, creating documents, formatting text, adding graphics, images, Word chart, and many other features available. You will see a full list of course content below. You'll also cover charts and tables, as well as using forms and mail merge. Part II: fundamentals of Microsoft Excel this part provides all the tools necessary to create and use basic spreadsheets. Participants will receive an overview of the interface and learn the various methods for entering and editing data. Additionally, participants will learn the various ways to write formulas, Create Worksheets and Workbooks, data analysis, create charts. Apply Custom Data Formats and Layouts, and others which will used to streamline reporting, turn raw data into presentation-ready graphs or chart. where One of the most common uses of Excel in petroleum engineering is for organizing and analyzing data related to well production data. Part III: Visual basic Application In Part 3 we will provide students with the skills to create & develop vb applications, where that allow Engineers to develop engineering applications that run in the Windows environment. VB provides the engineer a programming tool to write simple programs quickly that meet their needs. Example programs written using VB include gas and oil fluid correlations, interpolation software, gas well bottom hole pressure from surface conditions, volumetric reserve calculations, simple log analysis, water pattern analysis and bottom hole pressure analysis.

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	The main strategy that will be adopted in delivering this module is to Encourage students to ask and answer questions, as well as training students to implement many practical exercises in the laboratory (which covers most of what is studied in theoretical lectures), which in turn gives students the ability to carry out the work required of them in the future in their practical life.

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	41	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	5

Student Workload (SWL)
الحمل الدراسي للطالب محسوب لـ ٥١ اسبوعا

Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	24	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	5

Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل		75		

Module Evaluation

تقييم المادة الدراسية

		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	All
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	**Midterm Exam**	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment		100% (100 Marks)			

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Microsoft Word Create and Manage Documents: Create a Document, Navigate Through Document, Format a Document, Customize Options and Views for Documents, Print and save documents.
Week 2	Format Text, Paragraphs, and Sections: Insert Text and Paragraphs, Format Text and Paragraphs, Order and Group Text and Paragraphs
Week 3	Create Tables and Lists: Create a Table, modify a Table, Create and Modify a List.
Week 4	Insert and Format Graphic Element: Insert GraphicElements, FormatGraphic Elements, Insert and Format SmartArt Graphics
Week 5	**Microsoft Excel** :Manage Workbook Options and Setting: Create Worksheets and Workbooks,
	Navigate in Worksheets and Workbooks, Format Worksheets and Workbooks, Customize Options and Views for Worksheets and Workbook, Configure Worksheets and Workbooks for Distribution

Week 6	Apply Custom Data Formats and Layouts: Apply Custom Data Formats and Validation, Apply Advanced Conditional Formatting and Filtering, Create and Modify Custom Workbook Elements,Create Table: Create and Manage Table, Manage Table Styles and Options, Filter and Sort a Table
Week 7	Perform Operations with Formulas and Functions: Summarize Data by using Function, . Perform Conditional Operations by using Functions, Format and Modify Text by using Functions
Week 8	Create Charts and Objects: Create Charts, Format Charts, . Insert and Format Object,Manage Workbook Options and Settings
Week 9	**Excel VBA:**Introducing Visual Basic for Applications Displaying the Developer TabintheRibbonRecording a Macro
Week 10	Working with Procedures and Functions: Understanding Modules Creating a Standard Module,UnderstandingProcedures,Creating a Sub Procedure Calling Procedures,Using the Immediate Window to Call Procedures Creating a Function Procedure
Week 11	Understanding Objects: Understanding Objects,Navigating the Excel Object HierarchyUnderstandingCollections,Using the Object Browser,Working with PropertiesUsing the With Statement,Working with Methods
Week 12	Using Expressions, Variables, and Intrinsic Functions: Understanding Expressions and Statements,Declaring,Variables,UnderstandingDataTypes,Working with Variable Scope
Week 13	Controlling Program Execution: Understanding Control-of-Flow Structures Workingwith Boolean Expressions,Using the If...End If Decision Structures,Using the Select Case...End Select Structure
Week 14	,Using the Do...Loop Structure,Using the For...To...Next Structure,Using the For Each...Next Structure
Week 15	Working with Forms and Controls: Understanding UserForms,Using the Toolbox Working with UserForm Properties, Events, and Methods,, Understanding Controls
Week 16	**Final Exam**

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Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

</div>

	Material Covered
Week 1	practical exercises to Create and Manage Documents: Save & open document, Format a Document, Customize Options and Views for Documents, Print and save as documents.
Week 2	practical exercises about the Format Text, Paragraphs, and Sections: Insert Text and Paragraphs, FormatText and Paragraphs, Order and Group Text and Paragraphs
Week 3	practical exercises to Create Tables and Lists: Create a Table, modify a Table, Create and Modify a List.
Week 4	Insert and Format Graphic Element: Insert Graphic Elements, Format Graphic Elements, Insert and Format SmartArt Graphics(practical exercises + homework)
Week 5	(practical exercises +homework) about Microsoft Excel :introduction to interface , Create Worksheets and Workbooks, Import data from a delimited text file ▪ Add a worksheet to an existing workbook ▪ Copy and move a worksheet
Week 6	Practical exercises to :▪ Change worksheet tab color ▪ Rename a worksheet ▪ Change worksheet order ▪ Insert and delete columns or rows ▪ Change workbook themes▪ Adjust row height and column width ▪ Insert headers and footers
Week 7	practical exercises with homework about Customize Options and Views for Worksheets and Workbooks:▪ Hide or unhide worksheets ▪ Hide or unhide columns and rows ▪ Customize the Quick Access toolbar ▪ Modify document properties ▪ Display formulas
Week8	(practical exercises +homework)to Create Charts and Objects: Create Charts, Format Charts, . Insert and Format Object,Manage Workbook Options and Settings
Week9	Excel VBA:Introducing Visual Basic for Applications Displaying the Developer Tab in the Ribbon Recording a Macro(practical)
Week10	(practical exercises +homework):about Working with Procedures and Functions: Creating a Sub ProcedureCalling Procedures, Creating a Function Procedure
Week11	Using Expressions, Variables, and Intrinsic Functions: Understanding Expressions and Statements,Declaring,Variables,UnderstandingDataTypes,Working with Variable Scope(practical exercises + homework)
Week12	Working with Boolean Expressions, Using the If...End If Decision Structures, Using the Select Case...End Select Structure(practical exercises + homework):

Week13	Working with Do...Loop Structure,Using the For...To...Next Stru Working with Boolean Expressions, Using the If...End If Decision Structures, Using the Select Case...End Select Structure Working with Boolean Expressions, Using the If...End If Decision Structures, Using the Select Case...End Select Structure cture,Using the For Each...Next Structure(practical exercises + homework)
Week14	Working with Forms and Controls: How insert data to Worksheets and Workbooks, create function, perform arithmetic operation using VBA (practical exercises + homework)
Week15	**Preparatory week before the final Exam**

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	• Microsoft Office for Beginners,by , M.L. Humphrey, 2020. • MICROSOFT WORD & POWERPOINT FOR BEGINNERS & POWER USERS 2021: The Concise Microsoft Word & PowerPoint A-Z Mastery Guide for All Users Paperback by Tech Demystified,2021. • Microsoft Excel 2019 VBA and Macros ,By Bill Jelen, Tracy Syrstad · 2019	Y e s N

Grading Scheme
مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(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.

Module Title	Democracy and Human Rights	**Module Delivery**	
Module Type	Support	☒ Theory ☒ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar	
Module Code	UOKTB6UA106		
ECTS Credits	2		
SWL (hr/sem)	50		
Module Level	1	**Semester of Delivery**	1
Administering Department	Unmanned Aircraft Systems Engineering	**College**	College of Engineering
Module Leader		**e-mail**	
Module Leader's Acad. Title	Lecturer	**Module Leader's Qualification**	
Module Tutor	NA	**e-mail**	E-mail
Peer Reviewer Name	Name	**e-mail**	E-mail
Scientific Committee Approval Date	2025	**Version Number**	1.0

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

Module Aims أهداف المادة الدراسية	Human rights are the social standards and moral principles that must be available to all human beings. These rights cannot be violated. They are due and inherent to every person simply because they are human. They give all human beings value and dignity, and their basis is justice, freedom and peace. Full knowledge of their contents, borders and ways of guaranteeing them, as the provision for the inclusion of rights in the core of international and national constitutions and covenants does not achieve practical benefit unless effective guarantees are available against the violations they are exposed to over time As for Democracy is the rule of the people by the people and for the people

	without prejudice to the rights of states, nations and peoples by choosing the mechanisms and forms that suit them. As for its forms and expressions, they are subject to the specificities of nations and peoples and the special circumstances of societies. The essence of democracy is the rule of the people by the people for the benefit of the people, which includes fixed features and elements, the most important of which are: respect for man as an end, not a means, participation in governance by the people, and achieving the satisfaction of the governed.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	An ability to skillfully communicate orally with gathering of people and in writing with various managerial leavels An ability to work adequately on teams and to set up objectives , plan activities ,meet due dates and manage risk and uncertainty
Indicative Contents المحتويات الإرشادية	Developing the student's analytical and critical skills regarding the reality and future of human rights and democracy Enabling students to understand the importance of education and its role in spreading the culture of human rights and democracy in building a civilized society based on good governance, the most important of which is belief in human rights and education on them and active participation in governance through free and fair elections.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	A- Spreading the culture of human rights and informing university students about it. B - The student's awareness of his civil, political, economic, social, cultural and environmental rights and the importance of preserving them and not waiving them. c- Raising awareness and educating university students about the importance of democracy, its methods and how to practice it, and thus contribute to establishing the rule of law, which adopts democracy as a basis for building it. d- The need for the student to realize that the real bet on achieving the democratic system in the country is how to root the concept of democracy and its principles and apply them effectively and successfully away from copying and quoting from others.

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ٥١ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	45	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	2	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	0.13
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5, 10	LO #4 and 7
	Assignments	2	10% (10)	2, 12	LO # 4 and 7
	Recording the student's attendance		10% (10)	Continuous	All
	Report	1	10% (10)	13	LO # 4 and 7
Summative assessment	Midterm Exam	2 hr	10% (10)	7	LO # 4-7
	Final Exam	3hr	50% (50)	16	All
Total assessment		100% (100 Marks)			

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	The human rights means and its properties and sections and The human rights in the old nations
Week 2	Human rights in the monotheistic religions / Islamic, Jewish and Christian religions

Week 3	Sources of human rights at the international and national levels	
Week 4	Human rights guarantees at the internal and external levels	
Week 5	Guarantees of human rights at the Islamic level	
Week 6	The human rights future/The technology developmation and its effect on the rights and the freedoms/ The role of regional human rights organizations in protecting rights	
Week 7	The child rights in Islam/The woman rights in Islam /Non-overnmental organizations and their role in the defense of human rights/Intellectual human rights/Fight Human Trafficking	
Week 8	The concept of democracy and its roots / Definition of democracy	
Week 9	The democracy between global and the privat	
Week 10	forms of democracy/The direct democracy/The semi-direct democracy/The Parliamentary democracy	
Week 11	The Parliamentary democracy The Parliamentary democracybasics and its faces	
Week 12	Parliament and its internal organization	
Week 13	The election Concept/constituency/Electoral lists/Election campaign vote	
Week 14	election system Direct and indirect selection/ Individual selection and list/Majority system and proportional representation/interests representation system/Optional voting system and secret and compulsory voting	
Week 15	**Preparatory week before the final Exam**	
Week 16	**Preparatory week before the final Exam**	
Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	**Available in the Library?**

Required Texts	The human and the child rights and the democracy ((DR . Maher saleeh alaawi)) Iraq republic , minstery of the higher education and the scientific research 2009 -Also same references from the internet			
Recommended Texts				
Websites				

<table>
<tr><td colspan="5" align="center">Grading Scheme
مخطط الدرجات</td></tr>
<tr><td>Group</td><td>Grade</td><td>التقدير</td><td>Marks (%)</td><td>Definition</td></tr>
<tr><td rowspan="5">Success Group (50 - 100)</td><td>A - Excellent</td><td>امتياز</td><td>90 - 100</td><td>Outstanding Performance</td></tr>
<tr><td>B - Very Good</td><td>جيد جدا</td><td>80 - 89</td><td>Above average with some errors</td></tr>
<tr><td>C - Good</td><td>جيد</td><td>70 - 79</td><td>Sound work with notable errors</td></tr>
<tr><td>D - Satisfactory</td><td>متوسط</td><td>60 - 69</td><td>Fair but with major shortcomings</td></tr>
<tr><td>E - Sufficient</td><td>مقبول</td><td>50 - 59</td><td>Work meets minimum criteria</td></tr>
<tr><td rowspan="2">Fail Group (0 – 49)</td><td>FX – Fail</td><td>راسب (قيد المعالجة)</td><td>(45-49)</td><td>More work required but credit awarded</td></tr>
<tr><td>F – Fail</td><td>راسب</td><td>(0-44)</td><td>Considerable amount of work required</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td></tr>
</table>

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.

Module Title	**Mathematics II**	Module Delivery	
Module Type	**Basic**	☒ **Theory** ☐ **Lecture Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UOKTB6UA201**		
ECTS Credits	**6**		
SWL (hr/sem)	**150**		
Module Level	1	**Semester of Delivery**	Second
Administering Department	Unmanned Aircraft Systems Engineering	**College**	**College of Engineering**
Module Leader		**e-mail**	
Module Leader's Acad. Title		**Module Leader's Qualification**	
Module Tutor		**e-mail**	E-mail
Peer Reviewer Name	Name	**e-mail**	E-mail
Scientific Committee Approval Date	2025	**Version Number**	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	CENG114, Mathematics I	**Semester**	First
Co-requisites module		**Semester**	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	This course is intended to learn student the fundamentals of domain and range, learn students how they can draw the trigonometric functions, limits, types of integrals including fractional integral, quantify the area under curve, differentiation, and an introduction about the Polar Coordinates as well as the parametric equations.

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1-. Increase the students skills to deal with the mathematical engineering questions. 2- Increase the level of students in thinking. 3- Prepare the students to understand more developed materials. 4- Determine the area under curve using integration in which the students can use this method to determine the reservoir volume. 5- Perform a connection between the mathematical equations with the petroleum engineering major. 6- Use the optimum approaches to find the solution of mathematical questions.	
Indicative Contents المحتويات الارشادية	Indicative contents: Module 1: An Introduction of Mathematics Module 2: Domain and Range of Functions Module 3: Drawing the Trigonometric functions Module 4: Limits (Continuous and Discontinuous Module 5: Transformation functions including Period, Horizontal and Vertical ships, and Amplitude Module 6: Differentiation and derivative methods Module 7: Infinite and Finite Integrals Module 8: Integration Methods Module 9: An Introduction to Polar Coordinates	

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	Type something like: The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, homework's, discussion in class, and help session. This will be achieved through classes and interactive tutorials.	

Student Workload (SWL)
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	70	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	70	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**150**		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
	Quizzes	2	10% (10)	5 and 10	LO #1, #2 and #10, #11

Formative assessment	Assignments	2	5% (5)	2 and 12	LO #3, #4 and #6, #7
	Projects / **Lab.**	----	----	-----	------
	Report	1	5% (5)	13	LO #5, #8 and #10
Summative Assessment	Midterm Exam	2hr	10% (10)	7	LO #1 to #7
	Final Exam	3hr	70% (70)	15	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Module 1: Differentiation
Week 2,3	Module 2: Differentiation Rules
Week 3	Module 3: Higher derivative
Week 4	Module 4: derivative Trigonometric function
Week 5	Module 5: derivative of the inverse Trigonometric function
Week 6	Module 6: chain Rule
Week 7	Module 7: Parametric equations
Week 8	Module 8: L-Hopital Rule
Week 9	Module 9: Integration
Week 10	Module 10:Indefinite integrals
Week 11	Module 11 :Definite integrals
Week 12	Module 12: integral of Rational function
Week 13	Module 13:Integration factors
Week 14	Module14: Integration by parts
Week 15	Module 15: Application of Definite integrals

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Curriculum and Textbook	Yes
Recommended Texts	Calculus I	No
Websites	None	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition

Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX** – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(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.

Module Information
معلومات المادة الدراسية

Module Title	**Physics I**		**Module Delivery**
Module Type	**Basic**		☒ **Theory** ☒ **Lecture** ☐ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**
Module Code	**UOKTB6UA102**		
ECTS Credits	**5**		
SWL (hr/sem)	**125**		

Module Level	1	**Semester of Delivery**	1
Administering Department	Unmanned Aircraft Systems Engineering	**College**	**Engineering college**
Module Leader		**e-mail**	
Module Leader's Acad. Title	Lecturer	**Module Leader's Qualification**	Ph.D.
Module Tutor	Name (if available)	**e-mail**	E-mail
Peer Reviewer Name	Name	**e-mail**	E-mail
Scientific Committee Approval Date	2025	**Version Number**	1.0

Relation with other Modules
العلاقة مع المواد الدراسية الأخرى

Prerequisite module	GE108 Statics and Dynamics, GE101 Mathematics I	**Semester**	
Co-requisites module	none	**Semester**	

	Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. To develop problem solving skills and understanding of physics through the application of techniques. 2. gives insights into the role of physics in the search for and application 3. The module covers a number of measurement methods, and how these are used to determine important fundamentals parameters such as work, energy, power, fluid motion and thermal concept 4. Students will understand and employ the scientific method of inquiry to draw conclusions based on verifiable evidence. 5. Students will explain the impact of scientific theories, discoveries, or technological changes on society. 6. Students will demonstrate critical thinking skills in the analysis of scientific data.	
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Upon completion of this course, students will be able to: 1- Discuss the units of measurement for the physics topics presented in this course. 2- Describe the motion of an object this is subjected to a constant net force. 3- Calculate the path of an object subjected to a constant net force. 4- Apply the Work-Energy theorem and the conservation of energy principle to predict changes in the velocity of an object. 5- Describe the characteristics of matter in solid, liquid, and gas state. 6- Describe the equations of fluid flow , continuity equation, Archimedes theorem and Bernoulli equation 7- Describe the thermal effects occurring in matter in terms of molecular theory, internal energy, temperature, and heat and the phase change.	
Indicative Contents المحتويات الإرشادية	This course is a "must have" for anyone working with the subsurface within the life application. Students will understand and employ the scientific method of inquiry to draw conclusions based on verifiable evidence. Students will explain the impact of scientific theories, discoveries, or technological changes on society. Students will demonstrate critical thinking skills in the analysis of scientific data. understand that real data can be uncertain and that one has to use common sense and understanding in order to find good answers to the interpretation problems.	
	Learning and Teaching Strategies استراتيجيات التعلم والتعليم	

	Teaching/Learning Strategies include:
Strategies	1- Direct Instruction in classroom, 3 hrs per week+ 1 hr per week tutorial. 2- Classroom Discussions 3- tests, quizzes, class participation, projects, homework assignments, presentations. Methods of assessment for students. 1- Compulsory exercises 2- Quarterly exams. 3- Discussions and assignments for project. *The overall assessment for this course is as follows: Annual pursuit of 50 points from the total mark, which includes assignments, oral examinations and quarterly in addition to presentations. *50 marks for the final exam

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	60	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	55	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل			

Total SWL: **125**

Module Evaluation

تقييم المادة الدراسية

		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.	None	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)		

<table>
<tr><td colspan="5" align="center">**Delivery Plan (Weekly Syllabus)**

المنهاج الاسبوعي النظري</td></tr>
<tr><td></td><td colspan="4" align="center">**Material Covered**</td></tr>
<tr><td align="center">**Week 1,2**</td><td colspan="4" align="center">General Introduction</td></tr>
<tr><td align="center">**Week 3,4,5**</td><td colspan="4" align="center">Mechanical properties of Metals (part 1)</td></tr>
<tr><td align="center">**Week 6,7,8**</td><td colspan="4" align="center">Mechanical properties of Metals (part 2)</td></tr>
<tr><td align="center">**Week 9**</td><td colspan="4" align="center">med term</td></tr>
<tr><td align="center">**Week 10, 11**</td><td colspan="4" align="center">Forces and Newton Laws of Motion</td></tr>
<tr><td align="center">**Week 12, 13,14**</td><td colspan="4" align="center">Gravitation</td></tr>
<tr><td align="center">**Week 15**</td><td colspan="4" align="center">**Final Exam**</td></tr>
</table>

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	**Available in the Library?**
Required Texts	" Fundamentals of College Physics " Serway , McGraw-Hill Education	Yes
Recommended Texts	1- Fundamentals of Physics textbook 2- Schaum's outline of College Physics 3- Fundamentals of Physics	Yes
Websites	None	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX** – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(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.

Module Information
معلومات المادة الدراسية

Module Title	Engineering Mechanics I	Module Delivery	
Module Type	Core	☒ Theory	
Module Code	UOKTB6UA103	☐ Lecture	
ECTS Credits	5	☒ Lab	
SWL (hr/sem)	125	☐ Tutorial	
		☐ Practical	
		☐ Seminar	

Module Level	1	Semester of Delivery	1
Administering Department	Unmanned Aircraft Systems Engineering	College	College of Engineering
Module Leader		e-mail	E-mail
Module Leader's Acad. Title	Asst. Professor	Module Leader's Qualification	Ph.D.
Module Tutor	NA	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	2025	Version Number	1.0

Relation with other Modules
العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	This module covers two main parts: •Fundamental principles, about the motion, velocity, newton's laws, statistic inertia, fluid inertia, sliding fraction, rolling fraction and help the student to solve and understand the problems. •Strength of material is the discipline of investigating the relationships that exist between the structures and properties of materials. Engineering material is designing

	or engineering the structure of a material to produce a predetermined set of properties. This part covers principles of stress and strain. Develops understanding of force, heat deformation, material properties, allowable strength, young modulus Poisson ratio. It also covers hook laws, shear stress, Moher circles, and the general strain energy equation.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- The program prepares students for research and development in many frontier areas of engineering, including such as newton's laws, statistic and dynamic mechanic. 2- All students study the core theoretical subjects of fluid mechanics, dynamics, supplemented by courses in mathematics. 3- The program can be tailored to a student's interests through electives in engineering, mechanic or other applied sciences. 4- The program learn students the fundamental concepts of stress and strain. 5- Explain the concepts of shear and bearing stress. 6- Learn the Allowable force and safety factor for design materials. 7- Analysis and draw the Mohr's circle with bending diagrams
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: **Part I: fundamentals of Engineering Mechanics** principles, about the motion, velocity, newton's laws, statistic inertia, fluid inertia, sliding fraction, rolling fraction and help the student to solve and understand the problems. . (24 hrs) **Part II: Strength of materialfundamentals** principles of stress and strain. Develops understanding of force, heat deformation, material properties, allowable strength, young modulus Poisson ratio. It also covers hook laws, shear stress, Moher circles, and the general strain energy equation. (28 hrs)

Learning and Teaching Strategies

<div align="center">استراتيجيات التعلم والتعليم</div>

Strategies	The main strategy that will be adopted in delivering this module is to Encourage students to ask and answer questions, as well as presenting many experimental work labs to increase students' knowledge.

Student Workload (SWL)

<div align="center">الحمل الدراسي للطالب محسوب لـ ٥١ اسبوعا</div>

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	60	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	55	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل		150	

		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	All
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	**Midterm Exam**	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week	Newton's laws
Week	Types of the Fractions
Week	Velocity, velocity and accelerations
Week	Plane curvilinear motion (x-y) coordinate
Week	Plane curvilinear motion (n-t) coordinate
Week	Plane curvilinear motion (r-θ) coordinate
Week	Curvilinear motion
Week	stress, strain, Relationship between stress and strain.
Week	Study the concept of Shear Stress, Bearing Stress and Shear Strain.
Week	Allowable working stress factor of safety and the Thermal Stress and Strain.
Week	Elastic Constants (young modulus, Poisson ratio, shear modulus and bulk modulus).
Week	Principle stress (maximum and minimum stress).
Week	Mohr's circle and Principal strain.

Week	Drawing the shear force and bending moment diagrams, Theory of shearing stress in beams.
Week	Study the Beams, types and subject loads, Theory of bending stress in beams with calculations

Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered
Week 1	Tensile test
Week 2	Hardness test
Week 3	Impact test
Week 4	Particles size analysis
Week 5	Properties of engineering materials with regular shape test
Week 6	Properties of engineering materials with irregular shape test
Week 7	Study the passivity phenomenon test
Week 8	Torsion test
Week 9	Bending test
Week 10	Deflection of beam test
Week 11	Determination of moisture content
Week 12	Calculation of water formation test

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Engineering Mechanics: Statics & Dynamics 14th Edition Engineering Mechanics - Statics and Dynamics Book by A. Bedford and Wallace Fowler	
Recommended Texts	Hibbeler Dynamics Engineering Mechanics: Statics & Dynamics by Russell C. Hibbeler Philpot, Timothy A., and Jeffery S. Thomas. Mechanics of materials: an integrated learning system. John Wiley & Sons, 2020.	

	Timoshenko, Stephen. History of strength of materials: with a brief account of the history of theory of elasticity and theory of structures. Courier Corporation, 1983.	
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
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Module Information			
Module Title	**Workshop II**		Module Delivery
Module Type	Support		☐ Theory
Module Code	UOKTB6UA207		☐ Lecture
			☐ Lab
ECTS Credit/year	4		☐ Tutorial
			■ Practical
SWL/year	100		☐ Seminar
Module level	1	Semester of Delivery	2
Module Leader	Training and Workshops Center	College	**College of Engineering**
Module Leader Academic Title	Lecturer	e-mail	
Module Tutor		Module Leader's Qualification	MSc
Peer Reviewer Name		e-mail	

Scientific Committee Approval Date	2025	e-mail	
		Version Number	1

Relation with other Modules				
Prerequisite Module	-	Semester	-	
Co-requisite Module	-	Semester	-	
Module Aims, Learning Outcomes and Inductive Contents				
Module Aims	1-Preparing applied engineers in the field of engineering sciences who are distinguished by a high level of knowledge and technological creativity, in line with the strict standards adopted globally in quality assurance and academic accreditation of the corresponding engineering programs, while adhering to the ethics of the engineering profession. 2. Enable the student to know and understand work systems, risks, and the factors surrounding them. 3. Enable the student to know and understand theoretical principles in handicrafts and measurements.			
Module Learning Outcomes	1- To familiarize the student with the vocabulary of occupational safety and its importance in the field of work. 2- Acquisition of the student's manual operation skills, for example (Filings and Tinsmith workshops), and mechanical operation skills, for example (Turning). 3- Acquisition of the student's mechanical forming skills, for example (Casting and Blacksmithing). 4- The student acquires basic engineering skills such as Welding, Carpentry, and Electrical installations that serve him in the professional field. 5- Enabling the student to operate the various machines and devices in mechanical operations and formation. 6- Cooperative learning by working collectively.			

Inductive Contents	
	1. Introducing the student to the basics of the art of turning and milling, types of cold working machines, the skill of dealing with them, choosing metals, operational tools, and methods of measurement and standardization
	2. Introducing the student to the basics of the art of casting, hot forming, metal selection, method of working on casting furnaces and tools, and manufacturing casting molds
	3. Familiarize students with the basics of cars and the systems they use, as well as maintenance, disassembly, and assembly processes.
	4. Introducing students to the basics of household and industrial electrical appliances, the skill of using tools, and designing electrical circuits and control panels
	5. Introducing the student to the basics of the art of plumbing, leveling surfaces, the skill of using tools, manufacturing and installing geometric shapes, and methods of measurement and standardization
	6. Introducing the student to the basics of the art of blacksmithing, cold and hot forming of metals, the method of hardening them, and the skills of dealing with hand tools, forming machines, and heating furnaces
	7. Introducing the student to the basics of the art of filing and manual operation of metals with the help of manual, electrical, and mechanical tools, the skills of dealing with them, and the methods of measurement and standardization
	8. Introducing the student to the basics of the art of welding, the installation and assembly of metals, the types of welding machines, the skills of dealing with them, the types of welding, and the methods of measurement and standardization
	9. Introducing the student to the basics of the art of carpentry and woodworking with the help of manual, electrical, and mechanical tools, the skills of dealing with them, and methods of measurement and standardization

Student Workload (SWL)			
Structured SWL (h/sem)	93	Structured SWL (h/w)	6.00
Unstructured SWL (h/sem)	7	Unstructured SWL (h/w)	0.46
Total SWL (h/sem)	100		

Module Evaluation					
		Time/No.	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative Assessment	Quizzes				
	Assignments				All
	Projects / Practice	Every 3 weeks	60%	Continuous	
	Report				
Summative Assessment	Midterm Exam				
	Exam	Every 3 weeks	40%	Continuous	All
Total assessment			100%		
Delivery Plan (Weekly Syllabus)					
	Materials Covered				
Week 1	Welding workshop. -Occupational safety and its importance in welding workshops. -Introduction to the basics of welding. -Electric arc exercise. -An exercise for welding straight lines in a circular motion (helical).				
Week 2	Welding workshop - An exercise for welding straight lines with a crescent movement and other welding methods -Construction welding exercise.				
Week 3	Welding workshop. -Welding two pieces together. -Written exam in practical exercises. -				

Week 4	Casting workshop -Occupational safety and its importance in plumbing workshops. -Introduction to the basics of metal casting. -Simple wooden disc exercise. Half workout.
Week 5	Casting workshop Wheel exercise. Pushing arm exercise.
Week 6	Casting workshop. -Complete pulley exercise. -Circular pole exercise. -Written exam in practical exercises.
Week 7	Blacksmith Workshop -Occupational safety and its importance in blacksmithing workshops. -Introduction to the Basics of Blacksmithing. - Barbell adjustment exercise. -Eight-star exercise. - Exercise forming the number eight in English. -Six formation exercises in English.
Week 8	Blacksmith Workshop -An exercise forming the number five in English. - Exercise forming the number nine in English. . -An exercise in forming an iron model in the form of a circle
Week 9	Blacksmith Workshop
	- S-shape exercise. - Air hammer hot barbell exercise. - Exercise to form a circle on an electric bending machine. - Exercising cold and hot ornament formation. . - A written exam in practical exercises

Week 10	Automotive Workshop -Occupational safety and its importance in car maintenance workshops. -An introduction to cars and their basic parts. -Parts of the engine, how it works, types of engines, and methods of classification.
Week 11	Automotive Workshop - Open the engine and identify the parts -Lubrication system -Cooling system.
Week 12	Automotive Workshop -The fuel system. -The old and new ignition circuits. -Written exam in practical exercises.
Week 13	Turning Workshop -Introduction to lathe machines and identifying their parts -Measuring tools and the use of an oven measuring instrument -Circular column lathing exercise on different diameters.
Week 14	Turning Workshop -Exercise using the pen (semicircular R) brackets. An exercise in making different angles using a pen (square + angle pen 55).
Week 15	Turning Workshop - Making shaft with different diameter exercises using (left and right pen) - Workout (Tube Connection). -Written exam in practical exercises.

Learning and Teaching Resources		
	Text	Available in the library
Required Texts	Workshop technology and measurements, Ahmed Salem Al-Sabbagh,	yes
Recommended Texts		
Websites		

Module Information
معلومات المادة الدراسية

4

Module Title	**English Language I**	Module Delivery
Module Type	**Supportive**	**Theory Lecture**
Module Code	**UOKTB6UA206**	
ECTS Credits	**2**	
SWL (hr/sem)	**50**	

Module Level	1	Semester of Delivery	2
Administering Department	Unmanned Aircraft Systems Engineering	**College**	**College of Engineering**
Module Leader		**e-mail**	
Module Leader's Acad. Title	Lecturer	**Module Leader's Qualification**	Ph.D.
Module Tutor	None	**e-mail**	None
Peer Reviewer Name		**e-mail**	
Review Committee Approval	2025	**Version Number**	1.0

Relation With Other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	In view of the growing importance of English as a tool for global communication and the consequent emphasis on training students to acquire language skills, this syllabus of English has been designed to develop linguistic, communicative and critical thinking competencies of Engineering students. In English classes, the focus is going to be on the skills development in the areas of vocabulary, grammar, reading and writing. For this, we are going to use the prescribed text for detailed study. The students are encouraged to read the texts leading to reading comprehension and different passages may be given for practice in the class. The time should be utilized for working out the exercises given after each excerpt, and also for supplementing the exercises with authentic materials of a similar kind, for example, newspaper articles, advertisements, promotional material etc. The focus in this syllabus is on skill development, fostering ideas and practice of language skills in various contexts and cultures.

	The course will help to:
	➢ Improve the language proficiency of students in English with an emphasis on Vocabulary, Grammar, Reading and Writing skills.
	➢ Equip students to study academic subjects more effectively and critically using the theoretical and practical components of English syllabus.
	➢ Develop study skills and communication skills in formal and informal situations.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Use English Language effectively in spoken and written forms. 2. Comprehend the given texts and respond appropriately. 3. Communicate confidently in various contexts and different cultures. 4. Acquire basic proficiency in reading and listening, writing and speaking skills.
Indicative Contents المحتويات الإرشادية	Key skills taught will include: The basic structure and style of an academic essay. How to read texts more quickly and more critically, and how to use their ideas in written and oral arguments. What to listen out for in lectures and how to take more effective notes. How to participate more confidently in group discussion work. Improving accuracy in speaking and writing. Using a wider range of vocabulary to express your views more clearly. Giving formal presentations

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	Vocabulary building. This is an important component of any English class. This strategy focuses a portion of each classroom session on building a better vocabulary. Writer's workshop. Have students participate in a writer's workshop several times each year. The writing workshop model allows students to learn about and participate in all aspects of the writing process: drafting, revision, editing and publishing. Peer response and editing. This can be a very valuable teaching strategy for both the teacher and the student, and there are many peer response strategies to try in class. Students get a chance to think critically about others' writing and see the results their classmates got from a writing assignment.

Student Workload (SWL)

الحمل الدراسي للطالب

Structured SWL (h/sem)	20	Structured SWL (h/w)	5
الحمل الدراسي المنتظم للطالب خلال الفصل		الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem)	20	Unstructured SWL (h/w)	5
الحمل الدراسي غير المنتظم للطالب خلال الفصل		الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem)		50	
الحمل الدراسي الكلي للطالب خلال الفصل			

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	10	10% (10)	1- 10	LO # 1-4
	Assignments	5	10% (10)	11-14	LO # 1-4
	Projects	1	10% (10)	Continuous	LO # 1, 2
	Report	1	10% (10)	15	LO # 3
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO # 1-4
	Final Exam	2hr	50% (50)	15	All
Total assessment		100% (100 Marks)			

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Unit 1: Hello, am/are/is, my/your -This is –How are you –Good morning –What is this in English? –Numbers 1-10 –Plural. Unit 2: Your World, Countries –he/she, his/her –Where's he from? –fantastic/awful/beautiful –Numbering 1-30.
Week 2	Unit 3: All about you, -Jobs –Negative and questions –Personal information – Social expressions. Unit 4: Family and friends, our/their –Possessive's –The family –has/have –The alphabet.
Week 3	Unit 5: The way I live, -sports/food/drink Present simple –I/you/we/they -a/an –Language and nationalities –Number and rices Unit 6: Every day, The time –Present simple –always/sometimes/never –words that go together –Days of the week. , Quiz
Week 4	Unit 7: My favourites, -Question words –me/him/us/them –this/that -Adjective. Unit 8: Where I live, -Rooms and furniture –There is/are –Prepositions –Directions.
Week 5	Unit 9: Times Past, -Saying Years –was/were born –Past Simple –Irregular Verbs – have/do/go. Unit 10: We had a great time, -Sport are leisure –Going sightseeing, Quiz
Week 6	Unit 11: I can do that, -can/can't –Adverbs/Adjectives/Nouns –Everyday Problems. Unit 12: Please and thank you, -I'd like –Some/any –In a Restaurant –Sings all Around.

Week 7	Unit 13: Here and now, - Colors and Clothes – Present Continuous – Opposite Verbs – What's the Matter? Unit 14: It's Time to go, -Future Plans –Grammar Revision –Vocabulary Revision.
Week 8	Midterm Exam
Week 9	Introduction, Identification, Parts of Plane
Week 10	Learning the Names and Functions of the Various Surfaces
Week 11	Compound Nouns, Technical Readings, Quiz
Week 12	Use of Phrases to Establish Agree or Disagree, and Options. Fire Protection and Detection System Components.
Week 13	Messages, the ICAO Alphabet and Numbers.
Week 14	Solving Examples, Homework, and Various Problems.
Week 15	General Review
Week 16	**Final Exam**

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	English for Oil and Gas #1 (Oxford English for Careers: Oil and Gas, Lewis Lansford, D'Arcy Vallance, Jon Naunton, and Alison Pohl. Oxford University Press.).	Yes
Recommended Texts	English for Oil and Gas #2 (Oxford English for Careers: Oil and Gas, Lewis Lansford, D'Arcy Vallance, Jon Naunton, and Alison Pohl. Oxford University Press.).	No
Websites	https://t.me/+qmKQz0lBjq8zYWQy	

GRADING SCHEME

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	مقبول بقرار	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				

Module Information
معلومات المادة الدراسية

Module Title	**Physics II**	Module Delivery	
Module Type	**Basic**	☒ Theory ☒ Lecture ☐ Lab ☒ Tutorial ☐ Practical ☐ Seminar	
Module Code	**UOKTB6UA202**		
ECTS Credits	**6**		
SWL (hr/sem)	**150**		
Module Level	1	**Semester of Delivery**	2
Administering Department	Unmanned Aircraft Systems Engineering	**College**	**Engineering college**
Module Leader		**e-mail**	
Module Leader's Acad. Title	Lecturer	**Module Leader's Qualification**	Ph.D.
Module Tutor	Name (if available)	**e-mail**	E-mail
Peer Reviewer Name	Name	**e-mail**	E-mail
Scientific Committee Approval Date	2025	**Version Number**	1.0

Relation with other Modules
العلاقة مع المواد الدراسية الأخرى

Prerequisite module	GE108 Statics and Dynamics, GE101 Mathematics I	**Semester**	
Co-requisites module	none	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	7. To develop problem solving skills and understanding of physics through the application of techniques. 8. gives insights into the role of physics in the search for and application 9. The module covers a number of measurement methods, and how these are used to determine important fundamentals parameters such as work, energy, power, fluid motion and thermal concept 10. Students will understand and employ the scientific method of inquiry to draw conclusions based on verifiable evidence. 11. Students will explain the impact of scientific theories, discoveries, or technological changes on society. 12. Students will demonstrate critical thinking skills in the analysis of scientific data.

Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Upon completion of this course, students will be able to: 8- Discuss the units of measurement for the physics topics presented in this course. 9- Describe the motion of an object this is subjected to a constant net force. 10- Calculate the path of an object subjected to a constant net force. 11- Apply the Work-Energy theorem and the conservation of energy principle to predict changes in the velocity of an object. 12- Describe the characteristics of matter in solid, liquid, and gas state. 13- Describe the equations of fluid flow , continuity equation, Archimedes theorem and Bernoulli equation 14- Describe the thermal effects occurring in matter in terms of molecular theory, internal energy, temperature, and heat and the phase change.
Indicative Contents المحتويات الإرشادية	This course is a "must have" for anyone working with the subsurface within the life application. Students will understand and employ the scientific method of inquiry to draw conclusions based on verifiable evidence. Students will explain the impact of scientific theories, discoveries, or technological changes on society. Students will demonstrate critical thinking skills in the analysis of scientific data. understand that real data can be uncertain and that one has to use common sense and understanding in order to find good answers to the interpretation problems.

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	Teaching/Learning Strategies include: 4- Direct Instruction in classroom, 3 hrs per week+ 1 hr per week tutorial. 5- Classroom Discussions 6- tests, quizzes, class participation, projects, homework assignments, presentations. Methods of assessment for students. 4- Compulsory exercises 5- Quarterly exams. 6- Discussions and assignments for project. *The overall assessment for this course is as follows: Annual pursuit of 50 points from the total mark, which includes assignments, oral examinations and quarterly in addition to presentations. *50 marks for the final exam

Student Workload (SWL)
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل		70	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا		5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل		70	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا		5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل		**60**			

Module Evaluation تقييم المادة الدراسية					
		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.	None	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)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction
Week 2,3	Correlation between Components of Materials Science, Classification of Engineering Materials, Crystal Structure in the Solid Materials Crystal System Types, Atomic Packing Factor [A.P.F], Quiz
Week 4,5	Structure of Materials, Definitions, Materials, Atomic Structure, N- Type Material, P-Type Material Using Pure Crystals, Energy Band, Conductor Materials, Insulator materials, Semiconductor Materials, Electrical Conduction in Materials, Mobility and Conductivity, Current Density, Examples. Current Flow in Impurity Semiconductor Material, Drift Current, Diffusion current, Majority and Minority Carriers, Examples, Problems.
Week 6,7	PN Junction Diode, General Diode Equation, P-N Junction Forward Biased P-N Junction, Load Line and Quiescent Point, Diode Resistance, DC or Static resistance, A.C or Dynamic Examples, Zener diode, Zener Diode, Voltage Regulator, Examples, Quiz. Mechanical Properties of Metals, Elastic Deformation
Week 8, 9, 10, 11	Tutorials Mechanical Properties of Metals, Plastic Deformation Tutorials Mid Exam.

	Ductile and Brittle Materials	
Week 12, 13,14	True Stress-True Strain Curve, Quiz. Solving Examples and Homework. Solve Various Problems.	
Week 15	**Preparatory week before the final Exam**	

Learning and Teaching Resources

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX** – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(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.

Module Information

معلومات المادة الدراسية

Module Title	**Engineering Drawing (AutoCAD)**	Module Delivery
Module Type	Supportive	☒ Theory ☐ Lecture ☒ Lab ☐ Practical
Module Code	UOKTB6UA105	
ECTS Credits	4	
SWL (hr/sem)	**100**	

Module Level	1	Semester of Delivery	1
Administering Department		College	
Module Leader		e-mail	
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor		e-mail	E-mail
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	2025	Version Number	

Relation with other Modules			
العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	Semester	
Co-requisites module	Descriptive Geometry	Semester	2

Module Aims, Learning Outcomes and Indicative Contents
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	1. To emphasize the importance of drawing as a language for engineers 2. To develop skills in engineering drawing and drafting. 3. To develop skills in interpretation of engineering drawings 4. To develop skill of descriptive geometry and imagination of points, lines and objects. 5. To develop basic projection concepts with reference to points, lines, planes and geometrical solids. Also to develop sketching and drafting skills to facilitate communication. 6. To develop skills in computer aided drafting and design.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Get information about the important tools for engineering drawing. This will give student basic knowledge of technical drawings professions and means of communications to others. 2. Learning how to draw the shapes, angels and lines and others which is essential for engineer. 3. Develop student's imagination and ability to represent the shape size and specifications of physical objects. 4. Understand the main idea of using dimension for engineering drawing 5. Familiarize with different drawing equipment, technical standards and procedures for construction of geometric figures. This will give students ability to draw three dimension objects on the paper and to draw the pectoral drawings. 6. Explain the principle of projection and sectioning 7. Understand the intersection, development of surface of body and fasteners 8. Learning the main idea from assembly and detail drawing

Indicative Contents المحتويات الإرشادية	1. Instrumental Drawing, • Technical Lettering Practices and Techniques, Equipment and materials • Description of drawing instruments, auxiliary equipment and drawing materials • Techniques of instrumental drawing • Pencil sharpening, securing paper, proper use of T- squares, triangles, scales dividers, compasses, erasing shields, French curves, inking pens • Lettering strokes, letter proportions, use of pencils and pens, uniformity and appearance of letters, freehand techniques, inclined and vertical letters and numerals, upper and lower cases, standard English lettering forms 2. **Dimensioning** • Fundamentals and techniques • Size and location dimensioning, SI conversions • Use of scales, measurement units, reducing and enlarging drawings • Placement of dimensions: aligned and unidirectional 3. **Applied Geometry** • Plane geometrical construction: Proportional division of lines, arc & line tangents • Methods for drawing standard curves such as ellipses, parabolas, hyperbolas, involutes, spirals, cycloids and helices (cylindrical and conical) • Techniques to reproduce a given drawing (by construction) 4. **Multi view (orthographic) projections** • Orthographic Projections • First and third angle projection • Principal views: methods for obtaining orthographic views, Projection of lines, angles and plane surfaces, analysis in three views, projection of curved lines and surfaces, object orientation and selection of views for best representation, full and hidden lines • Orthographic drawings: making an orthographic drawing, visualizing objects (pictorial view) from the given views • Interpretation of adjacent areas, true-length lines, representation of holes, conventional practices • Sectional Views: Full, half, broken revolved, removed (detail) sections, phantom of hidden section, Auxiliary sectional views, specifying cutting planes for sections, conventions for hidden lines, holes, ribs, spokes • Auxiliary views: Basic concept and use, drawing methods and types, symmetrical and unilateral auxiliary views. Projection of curved lines and boundaries, line of intersection between two planes, true size of dihedral angles, true size and shape of plane surfaces
Learning and Teaching Strategies استراتيجيات التعلم والتعليم
Strategies	This is a beginning drawing course. Students are introduced to fundamental knowledge and skills such as line work, lettering, scale use, and sketching, multi-view drawings, sectional views, with the basics of manual drafting techniques and the use of drafting equipment.

	In the second semester the focus will be on the **Descriptive Geometry.**

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	50	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	5.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	40	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	4.8
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل		**100**	

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	1	10% (10)	5 and 10	
	Exercises	10	20% (10)	Weakly	
	Attendance & Activity	Daily	10% (10)	Daily	
Summative assessment	**Midterm Exam**	2hr	10% (10)	8	
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Practicing
Week 2	Practicing
Week 3	Practicing
Week 4	(Practicing) H.W. Sheet No. (1) – Lines and Lettering
Week 5	(Practicing) H.W. Sheet No. (2) – Simple Object Projection
Week 6	(Practicing) H.W. Sheet No. (3) – Simple Object Isometric
Week 7	(Practicing) H.W. Sheet No. (3) – Simple Object 3 Views drawing.
Week 8	Quiz No. (1)

Week 9	(Practicing) H.W. Sheet No. (4) – Object Views drawing (FV, TV, and LSV)
Week 10	(Practicing) H.W. Sheet No. (5) – Object Views drawing (FV, TV, and LSV)
Week 11	(Practicing) H.W. Sheet No. (6) – Object Views drawing (FV, TV, and LSV)
Week 12	(Practicing) H.W. Sheet No. (7) – Object Views drawing (FV, TV, and LSV)
Week 13	(Practicing) H.W. Sheet No. (8) – Object Views drawing (FV, TV, and RSV)
Week 14	(Practicing) H.W. Sheet No. (9) – Object Views drawing (FV, TV, and RSV) , (Practicing) H.W. Sheet No. (10) – Object Views drawing (FV, TV, and LSV)
Week 15	final Exam
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Drawing Practicing)
المنهاج الاسبوعي للمختبر

Material Covered: as mentioned above

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	**Geometric and Engineering Drawing (***Third Edition***)** ***K . MORLING*** Graduate of the Institution of Mechanical Engineers	No
Recommended Texts	**Fundamentals of Engineering Drawing** د.صلاح فرحان عبد شريف جامعة الكتاب	Yes
Websites	ENGINEERING DRAWING, , Course Developer, Er. C.S. Baladhiya http://ecoursesonline.iasri.res.in/course/view.php?id=78	

Grading Scheme
مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	**A** - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX** – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

University of Alkitab Faculty of
engineering
Unmanned aircraft systems engineering

Module Information

معلومات المادة الدراسية

		Module Delivery	
Module Title	**Engineering Mechanics II**		
Module Type	**Core**	☒ **Theory**	
Module Code	**UOKTB6UA203**	☐ **Lecture**	
ECTS Credits	**5**	☒ **Lab**	
SWL (hr/sem)	**125**	☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	

Module Level	1	**Semester of Delivery**	2
Administering Department	Unmanned Aircraft Systems Engineering	**College**	College of Engineering
Module Leader		**e-mail**	E-mail
Module Leader's Acad. Title	Asst. Professor	**Module Leader's Qualification**	Ph.D.
Module Tutor	NA	**e-mail**	E-mail
Peer Reviewer Name	Name	**e-mail**	E-mail
Scientific Committee Approval Date	2025	**Version Number**	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

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

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims أهداف المادة الدراسية	1. Understand the fundamental concepts and principles of Statics, including motion, forces, and acceleration. 2. Apply kinematic equations to analyze the motion of particles and rigid bodies in various scenarios. 3. Determine the relationship between forces, mass, and acceleration using Newton's laws of motion. 4. Apply the principles of work and energy to analyze and solve dynamic problems. 5. Analyze and calculate linear and angular momentum, and apply the principle of impulse and momentum to dynamic systems. 6. Understand and apply the principles of vibrations and oscillations in mechanical systems. 7. Apply principles of balancing rotating masses and vibrations to ensure smooth operation of machinery. 8. Analyze multi-degree of freedom systems and determine their natural frequencies and mode shapes.

	9.Apply dynamic principles to real-world engineering problems and systems.
	10.Develop critical thinking and problem-solving skills in the context of engineering Statics.
	11.Communicate effectively, both orally and in writing, to present and explain the analysis,results, and solutions of dynamic problems.
	By achieving these module objectives, students will gain a comprehensive understanding of the principles and applications of engineering Statics. They will be able to analyze and solve problems related to motion, forces, and vibrations in mechanical systems, and apply their knowledge to real-world engineering scenarios. They will also develop skills in critical thinking, problem-solving, and effective communication, which are valuable in the field of engineering.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1.Apply fundamental concepts of engineering mechanics/statics to analyze andsolve problems related to the equilibrium of rigid bodies.
	2.Demonstrate a deep understanding of vector mathematics and its application instatics, including vector addition, subtraction, dot product, and cross product.
	3.Apply the principles of static equilibrium to solve problems involving forces andmoments acting on rigid bodies in two and three dimensions.
	4.Analyze and calculate the internal forces, such as axial forces, shear forces, andbending moments, in statically determinate structures using methods such asthe method of sections and the method of joints.
	5.Utilize free-body diagrams to model and analyze the forces acting on a structureor a rigid body, and determine the resultant forces and moments at specificpoints.
	6.Analyze and calculate the centroid and moment of inertia of various two-dimensional shapes, including rectangles, triangles, and circles, and apply theseconcepts to determine the stability and strength of structures.
	University of Alkitab
	Faculty of engineering
	Unmanned aircraft systems engineering
	7.Apply the concepts of friction and its effects on the equilibrium of bodies instatics, including calculating static and kinetic friction forces and determiningthe angle of friction.
	8.Analyze and calculate the forces in trusses and frames, including the method ofjoints and the method of sections, and determine the stability and structuralintegrity of these systems.
	9.Apply the principles of equilibrium to solve real-world engineering problems,such as determining the stability of structures, calculating the forces onsupports and connections, and analyzing the behavior of mechanical systems.
	10.Communicate effectively, both orally and in writing, to present and explain theanalysis, results, and solutions of engineering mechanics/statics problems.By achieving these module learning outcomes, students will develop a strongfoundation in engineering mechanics/statics and be equipped with thenecessary knowledge and skills to analyze and solve a wide range of engineeringproblems involving static equilibrium and structural stability.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. 1.Introduction to Statics ●Definition and scope of statics ●Fundamental concepts and principles ●Importance of statics in engineering 2.Vectors and Vector Analysis ●Vector representation and operations ●Vector components and coordinate systems ●Vector addition, subtraction, and scalar multiplication 3.Forces and Moments ●Forces and their characteristics ●Resultant and equilibrium of forces

●Moment of a force and its properties
●Couples and their effects
4.Equilibrium of Rigid Bodies
●Free body diagrams and force analysis
●Equations of equilibrium in two and three dimensions
●Solving equilibrium problems using scalar and vector approaches
●Applications to simple systems and structures
5.Truss Structures
●Introduction to truss analysis
●Method of joints and method of sections
●Determination of member forces and support reactions
University of Alkitab
Faculty of engineering
Unmanned aircraft systems engineering
6.Friction
●Laws of friction and frictional forces
●Types of friction and their characteristics
●Calculation of frictional forces and moments
●Applications to inclined planes, wedges, and screws
7.Center of Gravity and Centroids
●Definitions and properties of center of gravity and centroids
●Determination of center of gravity and centroids of simple shapes
●Composite bodies and distributed loads
8.Moments of Inertia
●Moment of inertia and its physical significance
●Calculating moments of inertia for simple shapes
●Parallel-axis and perpendicular-axis theorems
●Application of moments of inertia in engineering analysisLearning

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The main strategy that will be adopted in delivering this module is to Encourage students to ask and answer questions, as well as presenting many experimental work labs to increase students' knowledge.

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ ٥١ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	60	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	55	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation

تقييم المادة الدراسية

		Time/Nu mber	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	All
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	**Midterm Exam**	2 hr	10% (10)	7	LO # 1-7
	Final Exam	2hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to Dynamic.
Week 2	Kinematics of Particles.
Week 3	Rectilinear Motion.
Week 4	Curvilinear Motion.
Week 5	Rectangular Components.
Week 6	Projectile Motion.
Week 7	Plane Curvilinear Motion.
Week 8	Normal and Tangential Coordinates (n-t)
Week 9	Polar Coordinates (r - Ө).
Week 10	Mid Exam
Week 11	Kinetics of Particles.
Week 12	Work Power and Efficiency.
Week 13	Principle of Work and Kinetic Energy.
Week 14	Impulse.
Week 15	Momentum.
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus)

المنهاج الاسبوعي للمختبر

	Material Covered

Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	
Week 8	
Week 9	
Week 10	
Week 11	
Week 12	

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1- Engineering Mechanics, Volume 1, Statics & Dynamics, Fifth Edition by J.L. Meriam & L.G. Kraige. 2- R. C. Hibbeler, "Engineering Mechanics: Statics & Dynamics", 14th ed. Pearson Prentice Hall.	
Recommended Texts	Hibbeler Dynamics Engineering Mechanics: Statics & Dynamics by Russell C. Hibbeler Philpot, Timothy A., and Jeffery S. Thomas. Mechanics of materials: an integrated learning system. John Wiley & Sons, 2020.	
	Timoshenko, Stephen. History of strength of materials: with a brief account of the history of theory of elasticity and theory of structures. Courier Corporation, 1983.	
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors

Group (50 - 100)	D - Satisfactory	مُتوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(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.

Module Information			
Module Title	**Fundamentals of Electrical Engineering I**	**Module Delivery**	
Module Type	Core	☒ Theory	
Module Code	**UOKTB6UA104**	☐ Lecture	
ECTS Credits	6	☐ Tutorial	
SWL (hr/sem)	100	☒ Practical	
		☐ Seminar	
Module Level	1	**Semester of Deliver**	1
Administering Department	UASE	**College**	Engineering
Module Leader		**e-mail**	
Module Leader's Acad. Title		**Module Leader's Qualification**	
Module Tutor		**e-mail**	
Peer Reviewer Name	**Name**	**e-mail**	**E-mail**
Scientific Committee Approval Date	**2025**	**Version Number**	**1.0**
Relation with other Modules			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	
Module Aims, Learning Outcomes and Indicative Contents			

Module Objectives	1. Preparing the student to study the different calculations in alternating current and direct current circuits, and to get acquainted with the various theories to study these calculations. 2. Understanding electrical principles and concepts: The module aims to provide students with a clear understanding of electrical principles and concepts, including voltage, current, resistance, and power. Students will learn how these concepts are applied in electrical circuits and systems. 3. Developing practical skills in electrical measurements and testing: The module aims to equip students with practical skills in using electrical instruments and equipment for measurements and testing. Students will learn how to perform accurate measurements, interpret the results, and troubleshoot electrical systems. 4. Applying knowledge to electrical machines and power systems: The module aims to enable students to apply their knowledge of electrical technology to the operation and maintenance of electrical machines, such as motors and generators. Students will also gain an understanding of power systems and their components, including power generation, transmission, and distribution.
Module Learning Outcomes	1. Understanding electrical circuit theory: Students will gain knowledge of fundamental electrical circuit theory, including concepts such as voltage, current, resistance, and power. They will be able to apply this understanding to analyze and solve basic electrical circuits. 2. Proficiency in electrical measurements and testing: Students will develop skills in using electrical instruments and equipment to measure and test electrical parameters. They will learn how to interpret measurement results and troubleshoot electrical systems to identify faults. 3. Application of electrical machines and power systems: Students will learn about electrical machines, such as motors and generators, and their operating principles. They will understand the characteristics and applications of these machines. Additionally, they will gain a basic understanding of power systems, including power generation, transmission, and distribution.
Indicative Contents	Part A - 1. Basic Electrical Principles, Electrical Measurements and Instruments [20 hrs] 2. Electrical Machines, Power Systems, Electrical Safety, Direct current circuit [20 hrs] 3. Revision and quiz [1.5 hrs] Part B – Alternating current circuit, Circuit Theory, Analogue Electronics Control Systems [20 hrs] 4. , Renewable Energy, Troubleshooting and Maintenance [10 hrs] Revision and quiz [1.5 hrs]
Learning and Teaching Strategies	

Strategies	1. Active Engagement: Actively engage with the subject matter by participating in class discussions
	2. Practice Problem Solving: Electrical Technology involves problem-solving skills.
	3. Hands-on Experience: Gain practical experience by participating in laboratory sessions and hands-on projects.
	4. Collaborative Learning: Engage in group discussions and study sessions with classmates.
	5. Utilize Resources: Take advantage of resources such as textbooks, online tutorials, video lectures, and educational websites to supplement your learning.
	6. Time Management: Create a study schedule and allocate dedicated time for studying Electrical Technology.
	7. Review and Recap: Regularly review previously covered topics to reinforce your understanding and retain information.

Student Workload (SWL)

Structured SWL (h/sem) الحمل الدراس المنتظم للطالب خلال الفصل	50	Structured SWL (h/w) الحمل الدراس المنتظم للطالب أسبوعيا	5
Unstructured SWL (h/sem) الحمل الدراس غري المنتظم للطالب خلال الفصل	40	Unstructured SWL (h/w) الحمل الدراس غري المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراس الكل للطالب خلال الفصل		100	

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5 and 10	LO #1and #2
	Assignments	2	5% (5)	2 and 12	LO #2 and #3
	Projects / Lab.	9	15% (15)	Continuous	LO #1 and #3
	Report	1	10% (10)	13	LO #3
Summative assessment	Midterm Exam	2hr.	10% (10)	7	LO #1 - #2
	Final Exam	2hr.	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	Symbols and abbreviations, electric circuit and its elements
Week 2	The direct-current network (kerchief's law & their use in network analysis
Week 3	Conversion of delta-connected resistance into an equivalent Wye connection & vice versa

Week 4	Power sources connected in parallel, node voltage method
Week 5	Loop current method.
Week 6	Super position method.
Week 7	Thevenin's theorem and Norton's theorem.
Week 8	Maximum power transfer.
Week 9	Reciprocity theorem
Week 10	Sinusoidal excitation, average, effective values and their steady- state analysis
Week 11	Generation of alternating current, sinusoidal current
Week 12	The mean values of current and voltage
Week 13	Complex Frequency, s-Plane, Poles and Zeros, Response Function, Bode Plots
Week 14	Frequency Response of Series/Parallel Resonances, High-Q Circuits
Week 15	Mutual Inductance, Linear and Ideal Transformers, Circuits with Mutual Inductance
Week 16	Final Examination

Delivery Plan (Weekly Lab. Syllabus)

	Material Covered
Week 1	Lab 1: : Introduction to Agilent VEE and PSPICE
Week 2	Lab 2: Kirchhoff's Laws
Week 3	Lab 3: series circuit
Week 4	Lab 4: Parallel circuit
Week 5	Lab 5: Thévenin's Theorem.
Week 6	Lab 6: Norton's Theorem.
Week 7	Lab 7: Y-connection delta-connection
Week 8	Lab 8: Second-Order Transient Responses
Week 9	Lab 9: Frequency Response of RC Circuits
Week 11	Lab 10: Frequency Response of RLC Circuits
Week 12	Lab 11: Filters
Week 13	Lab 12: AC circuit
Week 14	Lab 13: sine wave form
Week 15	Lab 14: Review

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	1. **"Electric Machinery and Power System Fundamentals" by Stephen J. Chapman** 2. **"Electricity and Electronics for HVAC" by Rex Miller and Mark R. Miller** 3. **"Principles of Electric Machines and Power Electronics" by P.C. Sen** 4. **"Electrical Power Systems: Design and Analysis" by Mohamed E. El-Hawary**	

Recommended Texts	1. "Electrical Wiring Residential" by Ray C. Mullin and Phil Simmons 2. "Industrial Electrical Troubleshooting" by Lynn Lundquist 3. "Electrical Safety Handbook" by John Cadick, Mary Capelli - Schellpfeffer, and Dennis Neitzel 4. "Digital Control Systems" by Benjamin C. Kuo 5. "Electromechanical Energy Conversion" by David J. Braun	
Websites	● (www.allaboutcircuits.com) ● (www.electrical4u.com) ● (www.khanacademy.org)	

Grading Scheme				
مخطط الدرجات				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	(راسب (قيد المعالجة	(45-49)	More work required but credit awarded
	F – Fail	راسب	(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.

Module Information

Module Title	**Fundamentals of Electrical Engineering II**		**Module Delivery**
Module Type	**Core**		☒ **Theory**
Module Code	**UOKTB6UA204**		☐ **Lecture**
ECTS Credits	**4**		☐ **Tutorial**
SWL (hr/sem)	**100**		☒ **Practical**
			☐ **Seminar**

Module Level	**1**	**Semester of Deliver**	**2**
Administering Department	**UASE**	**College**	**Engineering**

Module Leader		**e-mail**	
Module Leader's Acad. Title		**Module Leader's Qualification**	
Module Tutor		**e-mail**	
Peer Reviewer Name	**Name**	**e-mail**	**E-mail**
Scientific Committee Approval Date	**2025**	**Version Number**	**1.0**

Relation with other Modules

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

Module Aims, Learning Outcomes and Indicative Contents

Module Objectives	1.Preparing the student to study the different calculations in alternating current and direct current circuits, and to get acquainted with the various theories to study these calculations. 2. Understanding electrical principles and concepts: The module aims to provide students with a clear understanding of electrical principles and concepts, including voltage, current, resistance, and power. Students will learn how these concepts are applied in electrical circuits and systems. 3. Developing practical skills in electrical measurements and testing: The module aims to equip students with practical skills in using electrical instruments and equipment for measurements and testing. Students will learn how to perform accurate measurements, interpret the results, and troubleshoot electrical systems. 4. Applying knowledge to electrical machines and power systems: The module aims to enable students to apply their knowledge of electrical technology to the operation and maintenance of electrical machines, such as motors and generators. Students will also gain an understanding of power systems and their components, including power generation, transmission, and distribution.

Module Learning Outcomes	1. Understanding electrical circuit theory: Students will gain knowledge of fundamental electrical circuit theory, including concepts such as voltage, current, resistance, and power. They will be able to apply this understanding to analyze and solve basic electrical circuits. 2. Proficiency in electrical measurements and testing: Students will develop skills in using electrical instruments and equipment to measure and test electrical parameters. They will learn how to interpret measurement results and troubleshoot electrical systems to identify faults. 3. Application of electrical machines and power systems: Students will learn about electrical machines, such as motors and generators, and their operating principles. They will understand the characteristics and applications of these machines. Additionally, they will gain a basic understanding of power systems, including power generation, transmission, and distribution.
Indicative Contents	Part A - 1.Basic Electrical Principles, Electrical Measurements andInstruments [20 hrs] 2.Electrical Machines, Power Systems, Electrical Safety, Directcurrent circuit [20 hrs] 3.Revision and quiz [1.5 hrs] Part B – Alternating current circuit, Circuit Theory, Analogue Electronics Control Systems [20 hrs] 4., Renewable Energy, Troubleshooting and Maintenance [10 hrs] Revision and quiz [1.5 hrs] University of Alkitab Faculty of engineering Unmanned aircraft systems engineering
Learning and Teaching Strategies	

Unmanned aircraft systems engineering

Strategies	1.Active Engagement: Actively engage with the subject matter byparticipating in class discussions 2.Practice Problem Solving: Electrical Technology involves problem-solving skills. 3.Hands-on Experience: Gain practical experience by participating inlaboratory sessions and hands-on projects. 4.Collaborative Learning: Engage in group discussions and studysessions with classmates. 5.Utilize Resources: Take advantage of resources such as textbooks,online tutorials, video lectures, and educational websites tosupplement your learning. 6.Time Management: Create a study schedule and allocate dedicatedtime for studying Electrical Technology. 7.Review and Recap: Regularly review previously covered topics toreinforce your understanding and retain information.

Student Workload (SWL)

Structured SWL (h/sem) الحمل الدراس المنتظم للطالب خلال الفصل	**56**	**Structured SWL (h/w)** الحمل الدراس المنتظم للطالب أسبوعيا	**5**
Unstructured SWL (h/sem) الحمل الدراس غري المنتظم للطالب خلال الفصل	**34**	**Unstructured SWL (h/w)** الحمل الدراس غري المنتظم للطالب أسبوعيا	**5**
Total SWL (h/sem) الحمل الدراس الكل للطالب خلال الفصل		**100**	

Module Evaluation

		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	**2**	**10% (10)**	5 and 10	LO #1and #2
	Assignments	**2**	**5% (5)**	2 and 12	LO #2 and #3
	Projects / Lab.	**9**	**15% (15)**	Continuous	LO #1 and #3
	Report	**1**	**10% (10)**	13	LO #3
Summative assessment	**Midterm Exam**	**2hr.**	**10% (10)**	7	LO #1 - #2
	Final Exam	**2hr.**	**50% (50)**	16	All
Total assessment			**100% (100 Marks)**		

Delivery Plan (Weekly Syllabus)

	Material Covered

Week 1	Introduction
Week 2	Sinusoidal Alternating Waveforms
Week 3	Responses of R, L and C Elements to the Sinusoidal Voltage or Current, Average Power and Power Factor.
Week 4	Representation of Sine Wave in Phasor Form, Complex Numbers
Week 5	Series A.C Circuits: R-L Series cct., R-C series circuit, R- L- C Series cct., Quiz
Week 6	Parallel A.C Circuits: R-L Parallel cct, R-C Parallel Circuit- R-L-C Parallel cct., Quiz
Week 7	Equivalent Circuits, A.C. Power, Source Conversion
Week 8	Methods of Analysis: 1- Mesh Analysis (Format Approach) 2- Nodal Analysis (Format Approach)
Week 9	Mid. Exam
Week 10	Supper Position Theorem,
Week 11	Thevenin's Theorem
Week 12	Solving Examples
Week 13	Y-Δ and Δ-Y Conversion (A.C)
Week 14	Solve Various Problems
Week 15	General Review
Week 16	Final Examination

Delivery Plan (Weekly Lab. Syllabus)

	Material Covered
Week 1	Lab 1: : Introduction to Agilent VEE and PSPICE
Week 2	Lab 2: Kirchhoff's Laws
Week 3	Lab 3: series circuit
Week 4	Lab 4: Parallel circuit
Week 5	Lab 5: Thévenin's Theorem.
Week 6	Lab 6: Norton's Theorem.
Week 7	Lab 7: Y-connection delta-connection
Week 8	Lab 8: Second-Order Transient Responses
Week 9	Lab 9: Frequency Response of RC Circuits
Week 11	Lab 10: Frequency Response of RLC Circuits
Week 12	Lab 11: Filters
Week 13	Lab 12: AC circuit
Week 14	Lab 13: sine wave form
Week 15	Lab 14: Review

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	1- Introductory circuit Analysis by Robert L. Boylestad. 2- DC Electrical Circuit Analysis: A Practical Approach Copyright Year: 2020, dissidents.	

Recommended Texts	3-"Electrical Wiring Residential" by Ray C. Mullin and Phil Simmons 4-Industrial Electrical Troubleshooting" by Lynn Lundquist 5-"Electrical Safety Handbook" by John Cadick, Mary Capelli - Schellpfeffer, and Dennis Neitzel 6-"Digital Control Systems" by Benjamin C. Kuo 7-"Electromechanical Energy Conversion" by David J. Braun	
Websites	● (www.allaboutcircuits.com) ● (www.electrical4u.com) ● (www.khanacademy.org)	

Grading Scheme مخطط الدرجات				
Group	**Grade**	**التقدير**	**Marks %**	**Definition**
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	(راسب (قيد المعالجة	(45-49)	More work required but credit awarded
	F – Fail	راسب	(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.

Module Information

معلومات المادة الدراسية

Module Title	اللغة العربية	Module Delivery	
Module Type	Basic	☒ Theory	
Module Code	UOKTB6UA403	☐ Lecture	
ECTS Credits	2	☐ Lab	
		☐ Tutorial	
SWL (hr/sem)	50	☐ Practical	
		☐ Seminar	

Module Level	2	Semester of Delivery	2
Administering Department	UASE	College	
Module Leader	Lect. Ayub Salih Noori	e-mail	
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	PhD
Module Tutor	1	e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	2025	Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module		Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Aims	1- تمكين الطالب من الوقوف على حقيقة أحكام اللغة.

أهداف المادة الدراسية	2- صون اللسان عن الخطأ والنطق الصحيح بالحرف العربي
	3- أن يطبق القواعد النحوية والإملائية التي يدرها الطالب تطبيقا سليما.
	4- أن تتعزز فيه الميول الأدبية والمواهب .
	5- التذوق الجمالي والقدرات اللغوية المتميزة.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- المعرفة والفهم
	2-الوقوف على قواعد اللغة
	3- اعتزاز الطالب بالأمة العربية والإسلامية
	4-الحفاظ على الهوية الإسلامية
	5- الوقوف على حقيقة الإعجاز القرآني.
	6 تمكين الطالب من معرفة قواعد اللغة _
	7- ان يكتسب ثروة لغوية تمكنه من التعبير السليم في المواقف التي يمر بها في حياته
Indicative Contents المحتويات الإرشادية	1- أن يكتسب الطالب مهارة في إتقان قواعد اللغة.
	2- قادرا أن يعطي مثالا لكل باب من أبواب اللغة
	3-أن يتدرب على إخراج موضوعات اللغة من النصوص
	4- اعتزاز الطالب بهويته الوطنية والإسلامية ولغته .

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	1- الشرح والتوضيح واستخدام السبورة
	2- طريقة عرض المادة والمحاضرة
	3- الطريقة التقليدية ، الكتاب المنهجي إضافة إلى مصادر خارجية

Student Workload (SWL)
الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10% (10)	5, 12	LO #1 and 4
	Seminar	2	10% (10)	2, 10	LO # 1, 3 and 4
	Online assignments	2	10% (10)	3, 7	LO # 2, 4 and 7
	Report	1	10% (10)	13	LO # 1 and 3
Summative assessment	**Midterm Exam**	2 hr	20% (20)	7	LO # 1,3 and 4
	Final Exam	3 hr	50% (50)	16	LO # 1,3 and 4
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	اصول اللغة العربية واقسام الكلام
Week 2	انتشار اللغة العربية
Week 3	الجملة العربية
Week 4	المبتدأ والخبر – الشاعر حسان بن ثابت
Week 5	البلاغة والتعبير الابداعي
Week 6	فن الخطابة
Week 7	التفريق بين الضاد والظاء
Week 8	اختبار منتصف الفصل
Week 9	كان واخواتها وان واخواتها
Week 10	الفرق بين التاء المربوطة والهاء المربوطة

Week 11	قواعد العد والمعدود	
Week 12	مهارات تصميم المخاطبات الرسمية	
Week 13	رسم الهمزة	
Week 14	علامات الترقيم في اللغة العربية	
Week 15	**مهارات الكتابة الوظيفية**	
Week 16	الاختبار النهائي	

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	**Available in the Library?**
Required Texts	• كتاب العربية العامة	مركز التعليم المستمر
Recommended Texts		
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group **(50 - 100)**	**A - Excellent**	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group **(0 – 49)**	**FX – Fail**	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(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.

Module Title	Workshops I	Module Delivery	
Module Type	**Supportive**	☐ Theory	
Module Code	UOKTB6UA107	☐ Lecture	
		☐ Lab	
ECTS Credits	**4**	☐ Tutorial	
		☒ Practical	
SWL (hr/sem)	**100**	☐ Seminar	
Module Level	1	Semester of Delivery	1
Administering Department		College	
Module Leader	Dr. Salim Yahya Qasim	e-mail	salim.yahya@uoalkitab.edu.iq
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name	Name	e-mail	E-mail
Scientific Committee Approval Date	2025	Version Number	1.0

Relation with other Modules

Prerequisite module	None	Semester	
Co-requisites module	None	Semester	

Module Aims, Learning Outcomes, and Indicative Contents

Module Aims	Module Aim: The aim of the Theory of Flight module is to provide a comprehensive understanding of the fundamental principles and concepts related to aerodynamics and flight mechanics. It aims to equip aeronautical engineering students with the theoretical knowledge required to analyze, design, and optimize aircraft performance and stability.
Module Learning Outcomes	By the end of the module, students should be able to: 1- Understand the basic principles of aerodynamics and their application to flight. Analyze and explain the forces acting on an aircraft during flight. 2- Describe and evaluate the different types of aircraft configurations and their advantages and disadvantages. 3- Apply mathematical models to analyze the performance characteristics of aircraft. 4- Analyze the stability and control of aircraft using relevant theories and concepts.

5- Interpret and analyze experimental data related to flight performance.

| Indicative Contents | Indicative content includes the following.

Introduction to Aerodynamics and Flight: [25 hrs]
  - Historical overview of flight.
  - Classification of aircraft.
  - Introduction to airfoils, wings, and fuselage.
Fluid Mechanics Fundamentals: [25 hr]
  - Properties of fluids.
  - Fluid statics and dynamics.
  - Conservation laws (mass, momentum, and energy).
Aerodynamic Forces and Moments: [25 hr]

  - Newton's laws applied to aerodynamics.
  - Lift, drag, and moment coefficients.
  - Aerodynamic forces on airfoils and wings.
Aircraft Performance: [25 hr]

  - Types of drag (parasitic, induced, etc.).
  - Aircraft performance parameters (lift, drag, thrust, and weight).
  - Steady level flight and climb performance
Aircraft Configurations: [25 hr]

  - Fixed-wing aircraft configurations (monoplane, biplane, etc.).
  - High-speed aircraft configurations (supersonic and hypersonic).
  - Unconventional aircraft configurations (blended-wing body, canard, etc.).
Stability and Control: [25 hr]
  - Longitudinal, lateral, and directional stability.
  - Control surfaces and their effects.
  - Static and dynamic stability analysis. |

Learning and Teaching Strategies

| Strategies | The primary strategy for delivering this module will be to encourage students to participate in the exercises while refining and expanding their critical thinking skills. This will be accomplished through classes, interactive tutorials, and the consideration of simple experiments involving sampling activities that students find interesting. |

Student Workload (SWL)

Structured SWL (h/sem)	63	Structured SWL (h/w)	4.2
Unstructured SWL (h/sem)	37	Unstructured SWL (h/w)	2.46
Total SWL (h/sem)		100	

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	6	15% (15)	3,5,7,9,11,13	LO #1, 2, 3,4 and 5
	Assignments	6	15% (15)	2,4,6,8,12,14	LO #1, 2, 3,4 and 5
	Projects / Lab.		0% (0)		
	Report		0% (0)		
Summative	Midterm Exam	1hr	20% (20)	8	LO # 1-3
	Final Exam	3hr	50% (50)	16	All

assessment		Unmanned aircraft systems engineering		
Total assessment		100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	**Occupational Safety**
Week 2	**Occupational Safety**
Week 3	**Foundry Workshop**
Week 4	**Files type Workshop**
Week 5	**Files type Workshop**
Files type Workshop	**Files type Workshop**
Week 7	**Carpentry Workshop**
Week 8	**Carpentry Workshop**
Week 9	**Carpentry Workshop**
Week 10	**Turnery workshop**
Week 11	**Turnery workshop**
Week 12	**Turnery workshop**
Week 13	**Welding types Workshop**
Week 14	**Welding types Workshop**
Week 15	**Welding types Workshop**
Week 16	**The Final Exam**

Delivery Plan (Weekly Lab. Syllabus)

	Material Covered
Week 1	Lab 1: There are no laboratory experiments.

University of Alkitab Faculty of engineering
Unmanned aircraft systems engineering

Learning and Teaching Resources

	Text	Available in the Library?
Required Texts	John D. Anderson "Introduction to flight", Mc Graw Hill, 2012	Yes
Recommended Texts		
Websites		

Grading Scheme

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance.
	B - Very Good	جيد جدا	80 - 89	Above average with some errors.
	C - Good	جيد	70 - 79	Sound work with notable errors.
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings.
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria.
Fail Group (0 – 49)	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work is required, but credit is given.
	F – Fail	راسب	(0-44)	A significant amount of work is 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.

1. Course Name:
The crimes of The Baath regime in Iraq

2. Course Code:
UOKTB001

3. Semester / Year:
2nd Year, 1st Semester

4. Description Preparation Date:
2025

5. Available Attendance Forms: in presence

6. Number of Credit Hours (Total) / Number of Units (Total)
30 hours/ 2 hours a week

7. Course administrator's name (mention all, if more than one name)
Name: Dr. Farhan Khurshid Hamkool
Email:

8. Course Objectives

Course Objectives	• Making this generation aware of the crimes committed by the Baathist regime • The extent of human rights violations publicly • Spreading awareness of the extent of violation of Sharia and law.

9. Teaching and Learning Strategies

Strategy		Delivering theoretical lectures, opening the door to discussion, participation, asking questions, and getting to know each other The extent of human rights violations committed by the Baath regime in Iraq over a long period of time during which the Iraqi people suffered from the scourges of wars, mass graves etc. One of the heinous crimes at the international level

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	2	Rejecting Baathist	Concept of crimes	Theoretical	Class activity
Second	2	thought in all its forms	Effects of crimes	Theoretical	Quiz
Third	2	Recognizing the ugliness	Violations of law	Theoretical	Report
Fourth	2	crimes committed	Violations decisions	Theoretical	Midterms
Fifth	2	Violations committed	Prison and detention places	Theoretical	
		For the sake of humanity Oppressing. And	Environmental crimes		
Sixth	2	exterminating. The people	Destruction of cities and	Theoretical	
Seventh	2	Cruelty, intimidation and	villages	Theoretical	
Eighth	2	torture	Mass grave crimes	Theoretical	
Ninth	2	Politics of repression	Genocide cemeteries events	Theoretical	
Tenth	2	Reject the idea of change	The events of the Shaabani	Theoretical	
Eleventh	2	And expressing an	uprising	Theoretical	
Twelfth	2	opinion	Genocide cemeteries	Theoretical	
Thirteenth		Burying crime scenes	Kurdish cemeteries	Theoretical	
Fourteenth	2	Killing and slaughtering	Cemeteries of the Shaabaniya	Theoretical	
Fifteenth	2	the Shiite Kurds	Intifada	Theoretical	
	2	Concealing the evidence of crimes Continuous killing Hiding signs of genocide Collective the people	Chronological classification Cemetery sites		

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)	
Main references (sources)	A methodological book (Crimes of the Baath Regime in Iraq) Ministry of Higher Education and Scientific Research
Recommended books and references (scientific journals, reports...)	
Electronic References, Websites	

1. Course Name:

"Computer Programming"

2. Course Code:

UOKTB6UA305

3. Semester / Year:

2nd , 1st Semester

4. Description Preparation Date:

2025

5. Available Attendance Forms:

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

4 units

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

Name: Ghada Adnan Mutuab

Email: ghada.mutuab@uoalkitab.edu.iq

8. Course Objectives

Course Objectives	
	• Introduction & Basics
	• Selection
	• Iteration
	• Functions
	• Arrays
	• Pointers
	• Strings
	• Files

9. Teaching and Learning Strategies

Strategy	PBL

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1,2 3,4 5,6 7,8 9,10 11 12 13		GO6	• Pre-Increment & post - increment operators. • Conditional operator • Switch. • Loops. • Standard functions. • References • Classes	PBL	Report, Quiz, Mid Exam, Final Exam

11. Course Evaluation

Mid exam 10%, student activities 1305%, lab 10%, final exam 50%.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	• PROGRAMMING WITH C++, JOHN R. HUBBARD, SCHAUM'S OUTLINE SERIES, McGRAW-HILL, 2000.
Main references (sources)	-

	University of Alkitab Faculty of engineering	
Recommended books and references Unmanned aircraft systems engineering **(scientific journals, reports...)**		
Electronic References, Websites	-	

1. Course Name:

Advanced mathematics I

2. Course Code:

UOKTB6UA301

3. Semester / Year:

1st Semester, 2nd Year

4. Description Preparation Date:

2025

5. Available Attendance Forms:

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

6 units

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

Name: Mohamed Shahin Najmadin
Email:

8. Course Objectives

Course Objectives	- Partial derivative - Line Integral. - Double Integral - Triple integral. - Second Order Differential Equations - Vector.

9. Teaching and Learning Strategies

Strategy	PBL

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1,2 3,4 5,6 7,8 9,10 11,12		GO1	- Application of partial derivative - Application of line integration. - Application of double integration. - Application of triple integration. - Learn many methods to solve 2nd ODE. - Application of vectors.	PBL	Quiz, Mid Exam Final Exam

11. Course Evaluation

Mid exam 10%, student activities 40%, final exam 50%.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	• Advanced Engineering Mathematics.K.A.Stroud,2003
	• Advanced Engineering Mathematics, H.K. DASS. 2009
Main references (sources)	-
Recommended books and references (scientific journals, reports...)	-
Electronic References, Websites	-

1. Course Name:

"Measurements and Instrumentations"

2. Course Code:

UOKTB6UA406

3. Semester / Year:

2nd Semester, 2nd Year

4. Description Preparation Date:

2025

5. Available Attendance Forms:

Theoretical lecture + laboratory

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

30 h/ 4 units

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

Name: Dr. Mohammed Abdulqadir Sulaiman

Email: mohammed.sulaiman@uoalkitab.edu.iq

8. Course Objectives

Course Objectives	• Definition of the measurement process and units of measurement
	• Definition of measurement errors, their causes, and analysis
	• Study the basics of indicating devices and design ammeters and voltmeters
	• Study the types of bridges used to measure resistance and impedance.
	• Study of Transducer and its types
	• Study digital measuring devices

9. Teaching and Learning Strategies

Strategy	

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Understand the definit of measurement proce The main parts of measuring devices Understand and analyze units of measurement	Introduction to measurement	Theoretical explanation	An oral and written test and given Duties

		Understanding and analyzing measurement errors	Basic and derived units measurement	Theoretical explanation + problem solving	Written test and assignments
			Measurement errors	Theoretical explanation + problem solving	Written test and assignments
		Understanding and studying the basics of analogue indicating measuring devices	Analogue measuring devices	Theoretical explanation + problem solving	Written test and assignments
		Design of voltmeter and ammeter	Analogue current and voltage measuring devices	Theoretical explanation + problem solving	Written test and assignments
		Understanding and analyzing bridges, their types and applications	Bridges and their applications	Theoretical explanation + problem solving	Written test and assignments
		Understanding and analyzing Transducer, it types and applications	Transducer	Theoretical explanation + problem solving	Written test and assignments
		Signal analysis + understanding digital current and voltage measuring devices	Signal analysis + digital devices	Theoretical explanation + problem solving	Written test and assignments
		Understanding measurin devices for oil and gas testing	Measuring devices for o and gas testing	Theoretical explanation + problem solving	Written test and assignments

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

Exam score of 10 marks
Daily exam, 10 marks
Lab 10 degrees
Rating: 20 marks Final
exam 50 marks

12.Learning and Teaching Resources

Required textbooks (curricular books, if any)	
Main references (sources)	1-Electronic measurement systems. U.A.Bakshi 2-Electrical instrument and measurement techniques.W.D.cooper
Recommended books and references (scientific journals, reports...)	Electronic and electrical measurement and instrumentation. J.BGupta
Electronic References, Websites	

1. Course Name:

Strength of Materials

2. Course Code:

UOKTB6UA303

3. Semester / Year:

2nd Year, 1st Semester

4. Description Preparation Date:

2025

5. Available Attendance Forms:

Attendance

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

5 units

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

Name: Dr. Hindren Ali Saber

Email: hindren.saber@uoalkitab.edu.iq

8. Course Objectives

Course Objectives	- Introduces the fundamental concepts in mechanics of materials by study of the behavior of solid bodies under loads and deflections. - Study the simple bending theory for beams and the simple torsion theory for shafts (circular) and non-circular, deflection of beams, complex stresses, compounds beam. - Illustration and discussion the principles of free & forced vibrations and definition with and without damping. - Proceeding to the Student free & forced vibrations of single degree of freedom and two degree of freedom.

9. Teaching and Learning Strategies

Strategy	PBL

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1 2 3 4 5 6 7 8 9 10		GO2	• Simple stress and strain • Shearing force and bending moment diagrams • Bending Theory of the beam • Deflection of beams • Torsion Theory for Circle Shaft. • Free vibration of single degree of freedom system • Forced vibration of single degree of freedom system • Free vibration with damping • Forced vibration two degree of freedom • Forced vibration with damping	PBL	Quiz, Mid Exam, Final Exam

11. Course Evaluation

Mid exam 10%, student activities 30%, 10% lab, final exam 50%.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	• Mechanics of Materials I., E. J. HEARN, THIRD EDITION, 2007. • Strength of materials, G. G. Jon, 2009. • Mechanical vibration by S.S. Rao.
Main references (sources)	-
Recommended books and references (scientific journals, reports...)	-
Electronic References, Websites	-

1. Course Name:

Digital Electronics

2. Course Code:

UOKTB6UA405

3. Semester / Year:

2nd Year, 2nd Semester

4. Description Preparation Date:

2025

5. Available Attendance Forms:

Attendance

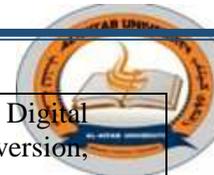## 6. Number of Credit Hours (Total) / Number of Units (Total)

4 units

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

Name: Ghada Adnan Mutuab
Email: ghada.mutuab@uoalkitab.edu.iq

8. Course Objectives

Course Objectives	• Access to logical Technology, Digital & Analog Quantities, Digital Electronic concepts, Number Systems, Number-Based Conversion, Signed Number Representation.
	• Logic Gates (NOT gate, AND gate, OR gate, NAND gate, NOR gate, XOR gate, XNOR gate).
	• Boolean Algebra and Logic Simplification, Boolean Operations & Expressions, Laws & Rules of Boolean Algebra.
	• De Morgan's Theorem, Boolean Expression for Logic Circuits, Simplification Using Boolean Algebra, Standard Form of Boolean Expression.
	• Karnaugh Map, Karnaugh Map SOP Minimization, Karnaugh Map POS Minimization.
	• Combinational Logic Analysis: Basic Combinational Logic Circuits, Implementing Combinational Logic.
	• Functions of Combinational Logic, Basic Adders, Comparators, Decoders, Encoders, Multiplexers, Demultiplexers.

9. Teaching and Learning Strategies

Strategy	PBL

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1,2 3,4 5,6 7,8 9,10		GO1	• Logic Technology • Logic Gates • Boolean Algebra. • De Morgan's Theorem. • Combinational Logic-	-	-

11. Course Evaluation

Mid exam 10%, student activities 30%, lab 10%, final exam 50%.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Introduction to Digital Electronics by John Crowe and Barrie Hayes Gill
Main references (sources)	-
Recommended books and references (scientific journals, reports...)	-
Electronic References, Websites	-

1. Course Name:

"Scientific English "

2. Course Code:

UOKTB6UA306

3. Semester / Year:

Second Year / 1st semester

4. Description Preparation Date:

2025

5. Available Attendance Forms:

Attendance

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

3 units

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

Name: Riam Taha Hamid
Email: Riam .hamid@uoalkitab.edu.iq

8. Course Objectives

Course Objectives	The aims which can be achieved during teaching this course program are as follows: Proceeding to the Student the benefits of studying English Language as Second language Giving Knowledge about using the Technical Terminologies in their studies Understanding of using the scientific English language in the Academic Program Giving Knowledge of how to write, describe, typing the reports in English

9. Teaching and Learning Strategies

Strategy	Lecturer – presentation and PBL

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1-2	4	Building grammar skil	Introduction: Building Grammar Skills, Sentence Construction (Subject, Verb, Object), Things to remember about subject verb agreement, Irregular Verbs, Vocabulary, Exercise 1. **Adjectives:** Types of Adjectives = Common Adjectives,	Examinatio ,Quizzes	Lecture &p.p Show

			Unmarried Adjectives, Proper Adjectives, Article Adjectives (Definite, Indefinite). **Adverb:** Types of Adverbs = Ending with –ly Adverbs, Non-ly Adverbs, Conjunctive adverbs; Adverb to describe a verb, Adverb to describe an adjective, Adverb to describe another adverb. **Possessive Nouns:** With singular nouns, with plural nouns ending in s, with plural nouns not ending in s. **Plural Nouns, Listening, Speaking, Vocabulary, Exercis**		
3-5	6	Distinguis hing betwee times	**Tenses:** Present Tense = Present Simple, Present Continuous, **Tenses:** Past Tense = Past Simple, Past Continuous, Past Perfect, P Perfect Continuo **Listening, Speaking, Vocabulary, Exercise** 4.,**Tenses:**Future Tense = Fut Simple, Fut	Examinatio ,Quizzes	Lecture &p.p Show

			Continuous, Fut Perfect, Fut Perfect Continuo		
			Listening, Speaking, Vocabulary, Exercise 5.		
6-7	4	Applying conditional sentences in writing a verbally	**Conditional:** First Conditional, Second Conditional Third Conditional, Mixed Conditional. Using Wish (Present, Past); Even Though Vs Even If; Any Longer Vs Anymore Vs No Longer. **Listening, Speaking, Vocabulary, Exercise 6. Midterm Exam**	Examinatio ,Ques	Lecture &p.p Show
8-9	4	Using numbers and countable in writing a verbally	**Used To Vs Be Used To Vs Get Used To. Countable or Uncountable:** Irregular Plural, Nouns that can be countable or uncountable, Nouns that can change from uncountable to countable **Listening, Speaking, Vocabulary, Exercise 7.** Think Vs Hope, Too Vs Too Much Vs Too Many, Enough + Noun & Adjective +	Examinatio ,Quizzes	Lecture &p.p Show

10-12	6	Use verbs of feeling in writing and verbally	Either Vs Neither, Dare & Need as Auxiliary Verbs. **Listening, Speaking, Vocabulary, Exercise 8.**		
			Verb After Preposition; Subject Questions; Verbs of Feeling. Because Vs Because of, Beside Vs Besides. **Listening, Speaking, Vocabulary, Exercise 9. Writing:** Avoid long sentences, avoid overusing the to be verbs, Avoid ambiguity, English Capitalization Rules. **Exercise 10. Writing:** English Punctuation Marks = Period, Comma, Semicolon. Applying Tenses, Subject- verb Agreement, and Conjunctions or Connectors on Writing; Who Vs. Whom. **Exercise 11.**	Examinatio ,Quizzes	Lecture &p.p Show
13-14	4	Focus on the literature	Literature Focus: Writing an Essay =	Examinatio ,Quizzes	Lecture &p.p Show

			Agree or Disagree, Preferences, and Description Essay Questions., **Phonetic Symbols:** Consonants, Vowels, Diphthongs (Two Vowels Together).		
15	2	Exam	Exam	Examinatio ,Quizzes	Lecture &p.p Show

11. Course Evaluation

Mid exam 10%, student activities 40%, final exam 50%.

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Soars, John, and Liz Soars. New Headway-PreIntermediate. Oxford University, 2003.
Main references (sources)	Soars, John, and Liz Soars. New Headway-PreIntermediate. Oxford University, 2003.
Recommended books and references (scientific journals, reports…)	Soars, John, and Liz Soars. New Headway-PreIntermediate. Oxford University, 2003.
Electronic References, Websites	

1. Course Name:

Aerodynamics I

2. Course Code:

UOKTB6UA302

3. Semester / Year:

2nd Year, 1st Semester

4. Description Preparation Date:

2025

5. Available Attendance Forms:

Attendance

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

5 units

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

Name: Assist. Prof. Dr Izzat Abdulrazaq Abdulkarim
Email: izzat.a@kecbu.uobaghdad.edu.iq

8. Course Objectives

Course Objectives	**Movement of air Parameters of air Equation of movemoment.....**

9. Teaching and Learning Strategies

Strategy	Air behavior movement , Its parameter and air equation

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
	2+1 2+1 2+1 2+1 2+1 2+1 2+1	Atmospherics Mach No + Reynolds No Continuity Equation Bernoulli's Equation 　Boundary layers Navier Stocks 　　Equation UAV Drag		Class + Discussion + Notes	Discussion + 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)	Aerodynamics of Student
Main references (sources)	Aerodynamics
Recommended books and references (scientific journals, reports...)	Aerodynamics
Electronic References, Websites	Aerodynamics

1. Course Name:

Composite Materials

2. Course Code:

UOKTB6UA404

3. Semester / Year:

2nd Year, 2nd Semester

4. Description Preparation Date:

2025

5. Available Attendance Forms:

In Class

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

30 Hours/ 3 Units

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

Name: Prof. Dr. Sabah Mohammd Jamil
Email: Sabah .jamil@uoalkitab.edu.iq

8. Course Objectives

Course Objectives	- In this course, you will learn about composite materials and their components by - Understanding composite materials and their properties. - Understanding the components of composite materials and the properties for each component, in addition to their types depending on the properties of each component. - Describe the mechanical behavior of composite materials and their components - Analysis of the stresses placed on the composite material and its components - Understanding how composite materials fail, and being able to start exploring

9. Teaching and Learning Strategies

Strategy	
	Composite materials are a specialty material used to increasing levels in multiple engineering fiel starting with high-performance aircraft performance, ground vehicles and even relatively low-tech applications in our daily lives. Professionals responsible for products and systems that rely on composite materials will benefit from a deeper understanding of how these materials are made, ho they are used, How to act, and how to fail. It is also important to understand that not all compos
	materials are the same, and that different types.Certain composite materials are suitable for particu applications, and the selection, design, manufacture and use of these materials requires considerations

10. Course Structure

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

Unmanned aircraft systems engineering

		Required Learning Outcomes	Introduction to composite materials	Traditional education enhanced by examples from public life	Quiz and other activities 15% Final exam 70%
1		An ability to to realize the concepts of composite materials and their behaviour during processing as well as recognize the classification of the matrix and fibers . In addition , analyze the composite materials in terms of stress and strain curve and examine the beaviour of these materials at different fiber directions .	➢		
3,4			The matrix (Primarily (phase		
5,6			➢ The Reinforcement or Fiber (Secondary Phase)		
6,7			➢ Micromechanical Analysis of Composite Strength and Stiffness		
8,9			➢ Volume fractions,mass fractions and densities		
10,11			➢ Packing of Fibers of composites Stress-Strain Behavior of the composites		
12,13			➢ Longitudinal Strength and Stiffness ➢ Transverse Modulus		
14			➢ In-Plane Shear Modulus and Poisson's ratio The Advantages and Disadvantages of the Composite Materials		
15			Mid 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)	
Main references (sources)	
Recommended books and references (scientific journals, reports...)	Materials Science and Engineering An Introduction
Electronic References, Websites	

1. Course Name:

Electrical and Electronic Circuits

2. Course Code:

UOKTB6UA304

3. Semester / Year: Semester

2nd Year, 1st Semester

4. Description Preparation Date:

2025

5. Available Attendance Forms:

Daily attendance according to the lecture schedule

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

5 units

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

Name: Dr. Haval Sardar Kamil

Email: haval.kamil@uoalkitab.edu.iq

8. Course Objectives

Course Objectives	The course introduces the basic concepts of electrical and electronic circuits, the basic electronic elements, introduces the theories of analyzing the operation of these circuits, in different working systems, and trains the student on practical applications in the field of forming these circuits from electronic elements (diodes, transistors...)

9. Teaching and Learning Strategies

Strategy	1- By explaining theoretical courses. 2- By applying solutions to the required problems.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	GO3	(Simplified Structure and Mode of operation, Type of transistor Connection- characteristic curve- load line-connection analysis of each type of connection, The BJT as an amplifier an as a switch)	Explanation of theoretical lect by subject teachers using teaching and presentation methods	Daily exams, daily student participation assessment, monthly exams, and final exams
2	2				
3	2		The basic structure- Characterizing BJT amplifier-CE amplifier- BC amplifier-Multistage amplifier- Differential amplifier.		
4	2		Characteristic of JEFT and biasing circuits, COSFET, D-MONSFET, MOS-FET, C/CS of transistor MOSFET amplifying circuits, Equivalent circuit, amplifier types CS, CD, CG.		
5	2		class A, class B, class AB, class C		

6	4		Feedback loop and the oscillators entering the oscillator circuits, RC- oscillator circuits, LC- oscillator circuits, crystal oscillators.		
7	2		Natural and step responses of an RL circuit.1, Natural and step responses of an RC circuit.1, Natural and step responses of a Parallel RLC circuit, Natural and step responses of a Series RLC circuit		
8	2		(Balanced 3-phase voltages, Balanced WYE-WYE connection, Balanced WYE- Delta connection, Balanced Delta - Delta connection, Power in balanced 3-phase system).		
9	4		(Series resonance, Parallel resonance, Transfer function, Decibel scale, Bode plots).		
10	4		(Impedance parameters, Admittance parameters, Hybrid parameters, Transmission parameters).		
11	2				
12	2				

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)	
Main references (sources)	1. Electronic Devices and Circuit Theory. . Electronic circuits & devices and circuits by Millman & Halkias. 3-Electronic circuits by Schlling
Recommended books and references (scientific journals, reports...)	All solid scientific journals that are related to the broad concept of electronic circuits
Electronic References, Websites	Accessing the Internet through the World Wide Web

1.Course Name:
Aerodynamics II

2.Course Code:
UOKTB6UA402

3.Semester / Year:
2ⁿᵈ Year, 2ⁿᵈ Semester

4.Description Preparation Date:
2025

5. Available Attendance Forms:
Direct Attendance

6. Number of Credit Hours (Total) / Number of Units (Total):
2 hrs., 5 units

7. Course administrator's name (mention all, if more than one name)
Name: Assist. Prof. Dr Izzat Abdulrazaq Abdulkarim Email: izzat.a@kecbu.uobaghdad.edu.iq

8. Course objectives	
Course objectives	1. To familiarize the student with the most important aircraft aerodynamics principles. 2. Familiarity with the parts of aircraft related to aerodynamics. 3. Know the different types of aircraft affecting its aerodynamics

9. teaching and learning strategies	
strategies	1 .General strategy 2. Diversified strategy

10.Course Structure

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

1-2	4	Criterion (1,4 and 7)	Introduction to the Basic Aircraft	Direct teaching method through lectures and	Written and oral exams
			Principles and Fundamentals	explanatory films	
3-5	6	Criterion (1,4 and 7)	Airfoil Shapes and Types affected upon aerodynamics	Direct teaching method through lectures and explanatory films	Written and oral exams
6-8	6	Criterion (1,4 and 7)	Effect of Aircraft Shape on its Aerodynamics	Direct teaching method through lectures and explanatory films	Written and oral exams
9-15	14	Criterion (1,4 and 7)	Effect of Wing Shape and Design on Aircraft Aerodynamics	Direct teaching method through lectures and explanatory films	Written and oral exams

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)	**Aerodynamics for Engineering Students** E.L. Houghton P.W. Carpenter Steven H. Collicott Daniel T. Valentine

University of Alkitab Faculty of
engineering
Unmanned aircraft systems engineering

Main references (sources)	**APPLIED AERODYNAMICS**
	Jorge Colman Lerner Ulfilas Boldes
Recommended books and references (scientific journals, reports...)	A Modern Course in Aeroelastici Earl H. Dowell
Electronic References, Websites	No

Module Information			
Module Title	**Sports**	**Module Delivery**	
Module Type	**Supportive**	☒ **Theory** ☐ **Lecture** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**UOKTB6UA407**		
ECTS Credits	**2**		
SWL (hr/sem)	**50**		

Module Level		**2**	**Semester of Delivery**	**2**
			College	**Engineering**
Module Leader	**Mohammed Abdulrahim Abdulkarim**		**e-mail**	
Module Leader's Acad. Title		**Assist Lecturer**	**Module Leader's Qualification**	**Msc**
Module Tutor	**Mohammed Abdulrahim Abdulkarim**		**e-mail**	
Peer Reviewer Name		**Hindren Ali Saber**	**e-mail**	
Scientific Committee Approval Date		**2025**	**Version Number**	**1.0**

Relation with other Modules			
Prerequisite module		**Semester**	
Co-requisites module		**Semester**	

Module Aims, Learning Outcomes, and Indicative Contents	
Module Objectives	**This course aims to enable students to get the knowledge and understanding of the theoretical principles of sport, including skills, tactics, and strategies required for effective training, practices, and game-day decisions.**
Module Learning Outcomes	**1 - This course will cover sport, fitness, and coaching, helping students understand the science and leadership behind these areas. Sport training may also help students to improve their skills in these areas.** **2- Taking a course in sports can fine-tune sports skills, provide training about the business and science behind sports and physical activity, and set the foundation for a future fitness-related career.**
Indicative Contents	**1. Enabling students to get the knowledge and understanding of the theoretical principles of sport.** **2. This knowledge includes an in-depth understanding of the skills, tactics, and strategies required for effective training, practices, and game-day decisions.** **3. Helping the students achieve physical fitness Improvement, sports skills Acquisition, and mental abilities Improvement.**

Learning and Teaching Strategies

Strategies	The branch uses problem-based learning which new and student-active method. The method helps the student get the program outcomes.

Student Workload (SWL)

Structured SWL (h/sem)	31	Structured SWL (h/w)	2
Unstructured SWL (h/sem)	19	Unstructured SWL (h/w)	1.3
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation

As		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	1	20%	5	LO #1, #2 and #10, #11
	Assignments	1	20%	7	LO #5, #8 and #10
	Projects /				
	Report				
Summative assessment	Midterm Exam	1.5	10%	10	
	Final Exam	3	50%		All
Total assessment					

Delivery Plan (Weekly Syllabus)

Week	Material Covered
Week 1	Sports - concept, benefits, and types. Fitness - the concept and elements of fitness
Week 2	Sports - concept, benefits, and types. Fitness - the concept and elements of fitness
Week 3	Football - concept + history, Football - basic soccer skills, Football Law - Article 1, 2
Week 4	Football - concept + history, Football - basic soccer skills, Football Law - Article 1, 2
Week 5	Football - concept + history, Football - basic soccer skills, Football Law - Article 1, 2
Week 6	Football Law - Articles 3, 4, 5, Basketball - concept + history,Basketball - basic basketball skills
Week 7	Football Law - Articles 3, 4, 5, Basketball - concept + history,Basketball - basic basketball skills
Week 8	Football Law - Articles 3, 4, 5, Basketball - concept + history,Basketball - basic basketball skills
Week 9	Anatomy, The skeleton, Circulatory system
Week 10	Anatomy, The skeleton, Circulatory system
Week 11	Anatomy, The skeleton, Circulatory system
Week 12	Muscular system - concept + muscle,injuries, Scouting - concept + stages + scouting law
Week 13	Muscular system - concept + muscle,injuries, Scouting - concept + stages + scouting law
Week 14	Biorhythm - concept + benefits + historical overview , Biorhythm cycles

Week 15	Biorhythm - concept + benefits + historical overview , Biorhythm cycles
Week 16	Biorhythm - concept + benefits + historical overview , Biorhythm cycles

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	1- **Ahmed, Imad Zubair (2005) "Technique and tactics in five-a-side football", 1st edition, Sinbad Printing Company, Baghdad, Iraq.** 2- **Haroun Muhammad Kishk, Five-a-side Football, Al-Jazeera Library, Mansoura, Cairo, Egypt (2004)** 3- **Akram Zaki Khattabiya: Modern Volleyball Encyclopedia, 1st edition, Amman, Dar Al-Fikr for Printing, Publishing and Distribution, 1996.** 4- **Aqeel Abdullah Al-Kateb: Volleyball in training, group plans, and physical fitness, Part 1, Higher Education Press, 1998.** 5- **Fayez Bashir Hamouda and Moayed Abdullah: Basketball. Dar Al-Kutub for Printing and Publishing, University of Mosul, 2nd edition, 1999.** 6- **Ali Albaik and Shaaban Ibrahim. Planning training in basketball: Alexandria, Manshaet Al-Maaref, 1995.**	
Recommended Texts		
Websites		

Module Title	**Advanced Mathematics II**	**Module Delivery**	
Module Type	**Basic**	☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	UOKTB6UA401		
ECTS Credits	**6**		
SWL (hr/sem)	**150**		
Module Level	2	**Semester of Delivery**	2
Administering Department	UASE	**College**	Engineering
Module Leader	Lect. Mohammed Shahin Najmadin	**e-mail**	
Module Leader's Acad. Title	Lecturer / MSc.	**Module Leader's Qualification**	
Module Tutor	-	**e-mail**	-
Peer Reviewer Name	-	**e-mail**	-
Scientific Committee Approval Date		**Version Number**	1.0

Relation with other Modules
العلاقة مع المواد الدراسية الأخرى

Prerequisite module	Advanced Mathematics I	**Semester**	1
Co-requisites module	-	**Semester**	-

Module Aims, Learning Outcomes and Indicative Contents

	أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية
Module Objectives (Aims) أهداف المادة الدراسية	The students will learn the second part of the advanced math 1. To develop problem solving skills and understanding of mathematical methods and theorems 2. To understand techniques of solving special functions 3. Understanding and using Laplace transforms mathematical methods. 4. How to use series in derivative and integration 5. This course deals with the basic advance engineering concept of stability systems
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	In this course, for students will learn: 1. Recognize solving techniques of special functions 2. Discuss Taylor series T.S. and Maclaurin Series M.S. & Fourier series. 3. Describe some theories of Laplace transforms . 4. Define singular & regular points ,equilibrium points.
Indicative Contents المحتويات الإرشادية	In this course, students will learn: • Special functions (gamma & beta) • Laplass transforms (Main properties, Laplace transforms theorems , some Techniques) • Power Series (Definition, Types) • Some Techniques of (singular & regular points ,equilibrium points) .

Learning and Teaching Strategies
استراتيجيات التعلم والتعليم

Strategies	The branch use a problem based learning which new and student active method. The method helps the student getting the program outcomes.

Student Workload (SWL)
الحمل الدراسي للطالب محسوب لـ 15 اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	59	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	91	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**150**		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	6	10% (10)	5 to 10	LO #1, #2 and #10, #11
	Assignments	5	20% (20)	2 to 12	LO #3, #4 and #6, #7
	Projects / Lab.				

1

	Report	1	10% (10)	5 to 10	LO #1 - #11
Summative assessment	Midterm Exam	2hr	10% (10)	10	LO #1 - #10
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Special functions (gamma & beta) Gamma function Definition, properties,examples
Week 2	Special functions (gamma & beta) beta function Definition, properties ,examples + Quiz
Week 3	Laplace transforms Main properties
Week 4	Laplace transforms Laplace transforms theorems
Week 5	Laplace transforms Laplace Inverse transforms + Quiz
Week 6	Laplace transforms Fractional parts method
Week 7	Laplace transforms The cover up rule
Week 8	Laplass transforms Using Laplace transforms to solve differential equations * first order+ Quiz
Week 9	Laplass transforms Using Laplace transforms to solve differential equations * second order
Week 10	Mid Exam
Week 11	Power Series Taylor Series T.S
Week 12	Power Series Maclaurin Series M.S + Quiz
Week 13	Fourier series Even , Odd, Linear functions as types of Fourier series Drawing functions in Fourier term
Week 14	Fourier series Drawing functions in Fourier term + Quiz
Week 15	Same mathematical concept (singular & regular points)
Week 16	Final Exam

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	**Available in the Library?**
Required Texts	- Advanced Engineering Mathematics, H.K. DASS. 2009 -Thomas Calculus, George B. Thomas et al, 12th, edition, 2010, USA.	Yes

Recommended Texts	- Howard Anton and et all, calculus, 7th edition, 2002.	No
	-K.A.Stroud, Engineering mathematics,2nd edition, Hong Kong, 1983	
	- George B. Thomas, calculus & Analytic geometry, 4th edition, USA ,1974	
	- Mark Dugopolski , intermediate Algebra, 3rd edition, 2000	
	- John bird , "Higher Engineering Mathematics" , 5th edition, Britain, 2006	
Websites	https://www.coursera.org/browse/ mathematical-science-and-engineering/ engineering mathematics	

Grading Scheme
مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(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.

Module Title	**Theory of Machines**	Module Delivery
Module Type	**Core**	☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	UOKTB6UA408	
ECTS Credits	**4**	
SWL (hr/sem)	**100**	

Module Level	2	Semester of Delivery	2
Administering Department	UASE	College	
Module Leader	Dr. Salim Yahya Qasim + Eng. Anfal Shakir	e-mail	
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.

Module Tutor	-		e-mail	
Peer Reviewer Name	-		e-mail	-
Scientific Committee Approval Date	2025		Version Number	1.0

Relation with other Modules

العلاقة مع المواد الدراسية الأخرى

Prerequisite module		Semester	
Co-requisites module		Semester	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	- The performance of each aircraft engine is examined at different operating conditions and the results are given in three-dimensional illustrations combining several variables. - Developments and future trends in these engines are highlighted. - The aerodynamic and thermodynamic behaviors of non rotating components or modules including the intake, combustion chamber, and nozzle are given. - Comprehensive and complete coverage of the aerothermodynamics of rotating elements, compressors, and turbines is provided. - A detailed step-by-step design of axial compressors is proposed. - Practical problems such as erosion and fouling of compressors are discussed, outlining their contributions to off-design conditions. - Large number of solved examples are included that cover both aero engine performance and component aerodynamic and mechanical designs.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	After completing this course, students will have the ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. The majority of the lectures and homework of this course deal with the derivations and application of linear mathematics and engineering theory for circuit analysis
Indicative Contents المحتويات الإرشادية	• Boosting students' interest through interactive lesson delivery improves learning. • Improving teacher and students relationship improves learning. • Encouraging students to participate freely in lesson delivery improves stude learning. • Provision of efficient laboratories and workshops makes students to improve in their learning.

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

Strategies	The branch use problem-based learning which new and student-active method. The method helps the student get the program outcomes.

University of Alkitab Faculty of
engineering
Unmanned aircraft systems engineering

Student Workload (SWL)

الحمل الدراسي للطالب محسوب لـ 15 اسبوعا

Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	73	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	27	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.8
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	100		

Module Evaluation

تقييم المادة الدراسية

		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	20% (20)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.		10% (10)		LO 1-6
	Report				
Summative assessment	Midterm Exam	2 hr	10% (10)	10	LO #1 - #10
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	**- Introduction** Classification of Aircraft Engines Aircraft Engine Performance Parameters
Week 2	**-Thrust equation of Jet propulsion** The rate of climb Maneuverability for fighters Short take-off distance for aircrafts operating from air carriers
Week 3	**-Aero Piston Engines** Turboprop engines Turbo shaft engines Prop fan engines
Week 4	**Turbine-Based Engines: Turbojet, Turbofan, and Turbo ramjet Engines** Thermal Efficiency, Propeller Efficiency Overall Efficiency
Week 5	**Tutorials + Quiz 1**

University of Alkitab Faculty of
engineering
Unmanned aircraft systems engineering

Week 6	**unmanned aerial vehicles** Specifications and Calculations Range and altitude
Week 7	**Drone Engines** The CTJ-1 turbojet engine Micro Turbojet Engine
Week 8	Introduction, Electrical Machines, Classifications, Working principle of Electric Machines.
Week 9	DC machine:- (Structure, How a DC Motor Work, Classifications, Types)
Week 10	DC Motor:- (Back EMF, Equivalent circuit, EMF Equation, Power Equation).
Week 11	Power Flow and Losses in DC Machines, Voltage and Current Relations for DC Shunt Motor , Voltage and Current Relations for DC series Motor.
Week 12	Magnetization curve, Armature Reaction.
Week 13	Characteristics of DC Shunt Motor, Characteristic of a DC Series Motor, Speed Control Methods of DC Motor.
Week 14	Special motors:- Servo Motor, BLDC Motor, Stepper motor.,The use of special motors in Unmanned Aircraft.
Week 15	Speed Control of Unmanned Aircraft by using special motors.

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	● Aircraft Propulsion and Gas Turbine Engines, Ahmed F. Al sayed , 20011, Egypt ● Electrical Machines, S. K. Sahdev, Cambridge University Press. ● ELECTRIC MACHINERY FUNDAMENTALS, FOURTH EDITION Stephen J. Chapman BAE SYSTEMS, Australia	**Yes**
Recommended Texts	Materials Science and Engineering, An Introduction, William D Cllister and David G. Rethwisch,10th Edition.	**Yes**
Websites		

Grading Scheme
مخطط الدرجات

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	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings

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University of Alkitab Faculty of
engineering
Unmanned aircraft systems engineering

	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX – Fail**	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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Course Description Form

1. Course Name:
"Democracy and Human Rights "

2. Course Code:
UOKTB6UA106

3. Semester / Year:
First year/ first semester

4. Description Preparation Date:
2025

5. Available Attendance Forms:
lec.

6. Number of Credit Hours (Total) / Number of Units (Total)
2/2

7. Course administrator's name (mention all, if more than one name)
Name: Dr. Muaid Saady Zakry Email: Muaid.r. zakry@uoalkitab.edu.iq

8. Course Objectives

Course Objectives	The importance of the subject of human rights and democracy lies in the student's study of the most important rights contained in international norms and laws, as well as what is stated in Islamic law and the Iraqi constitutions, especially the effective constitution of 2005, as well as the student's knowledge of the international covenants issued regarding human rights, on the one hand and on the other hand. Informing the student about the experiences.

9. Teaching and Learning Strategies

Strategy	The course will use a combination of lectures, interactive discussions and solution sessions Problems to introduce students to optimization principles and techniques. Practical exercises, case studies and practical examples will be used to reinforce theoretical concepts and enhance understanding.

10. Course Structure

University of Alkitab Faculty of
engineering
Unmanned aircraft systems engineering

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2	Demonstrate an understanding of motion along curves, including differentiation and integration of vector-valued functions.

Apply Taylor and Maclaurin series to approximate functions and solve real-world problems.

Analyze functions of more than one variable using partial derivatives and gradients.

Identify and find extreme values of functions of multiple variables.

Apply the Lagrange multiplier method to optimize functions with constraints. Understand the concept of multiple integrals, specifically double | Definition | Civilized discussion, advice, guidance, and guidance of students on an ongoing basis. | Conducting daily tests, monthly and annual examinations, requesting daily practical reports, projects and research. |
2,3	2		The historical and intellectual development of democracy in society		
4,5,6	2		Democracy in the Islamic system of government		
7	2		**Midterm examine**		
8,9	2		Contemporary political thought		
10,11	2		Characteristics of democracy		
12,13	2		Models of democracy		
14,15	2		Pillars of democracy		
16,17	2		The election		
18,19	2		The importance of democracy in society		
20,21	2		Advantages of democracy		
22,23	2		Defects of democracy Obstacles to implementing democracy in Iraq		
24,25,26			Forms of governments		
27,28			review		
29			Final – Term exam		

		integrals, and evaluate them. Apply techniques for changing the order of integration in multiple integrals. Solve first-order differential equations, especially separable equations. Define and classify second-order differential equations.			

11. Course Evaluation

First test: 10%
Test 2: 10%
Attendance and activities: 30%
Final exam: 50%

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Human Rights and Democracy, Prepared by A.M.D. Ghassan Karim Majzab, A.M. Amjad Zein Al-Abidin Touma 2018
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	