



**Ministry of Higher Education and Scientific
Research
Scientific Supervision and Evaluation Authority
Department of Quality Assurance and
Academic Accreditation
Accreditation Department**



Description of the Academic Program and Course of study

**Al-Farabi University
College of Engineering
Department of Artificial Intelligence Engineering**

2026–2025

Academic Program Description Form

University Name: Al-Farabi University

College / Institute: College of Engineering

Academic Department: Department of Artificial Intelligence Engineering

Name of Academic or Professional Program: Artificial Intelligence Engineering

Name of Final Degree: Bachelor of Artificial Intelligence Engineering

Science Study System: Courses System

Description Preparation Date: 16/8/2026

Date of filling out the file: 16/8/2026

Signature:

Department Head Name: Prof. Dr. Mohamed Amer

Date: 18/8/2026



Signature:

Assistant Dean for Scientific

Affairs Name: د. محمد رشاد

Date: 19/8/2026

Signature:

Reviewed by Quality Assurance and University Performance Unit

Name of the Director of Quality Assurance and University Performance Unit:

Prof. Dr. Hassan Hammoud

Date: 18.8-2026

جامعة الفارابي
كلية الهندسة

جامعة الفارابي
كلية الهندسة
إدارة التطوير والجودة

Approved by the Dean of the College of Engineering, Al-Farabi University

Dr. Asaad Abd Al-Ameer

1- Program Vision

To achieve leadership and academic and research excellence in **Artificial Intelligence Engineering**, while fostering innovation and advancement in the design, development, and application of intelligent systems based on **Artificial Intelligence** technologies. The program aims to contribute to meeting the needs of society and the labor market, supporting **digital transformation** and **sustainable development**, while adhering to international academic and engineering standards and **ABET** requirements.

2- Program Mission

- To provide an educational environment that fosters **creativity and innovation**, enhancing students' competencies in **Artificial Intelligence, High-Performance Computing**, and emerging digital technologies.
- To prepare and graduate **competent and visionary engineering and scientific professionals** equipped with advanced technical skills in **data analysis and systems modeling**, while upholding high standards of professional ethics and **technology governance**.
- To provide rigorous **hands-on learning experiences** and integrated curricula aligned with international quality standards and accreditation requirements, including **ABET**, thereby bridging theoretical and algorithmic concepts with real-world industrial and practical applications.
- To strengthen **academic and research communication** between students and faculty members and leverage **virtual learning environments and intelligent platforms** to overcome temporal and spatial barriers and promote the delivery of **inclusive, high-quality education**.

3- Program Objectives

- **Advanced Knowledge and Technical Proficiency:** Equip students with fundamental and advanced competencies in **Data Engineering** and advanced **Artificial Intelligence** software and technologies, including **Python, R, MATLAB, GPU computing**, as well as modern programming languages, libraries, and frameworks such as **TensorFlow, PyTorch, and OpenCV**.
- **Practical Application and Engineering Modeling:** Train students to design and develop **intelligent systems, Artificial Neural Networks, robotics and autonomous systems**, and to analyze and interpret **big data** using advanced mathematical and statistical theories and methods.
- **Scientific Research and Software Innovation:** Support and nurture talented and high-achieving students by engaging them with contemporary technological challenges and emerging research topics through **graduation projects and applied scientific research**, contributing to the development of **patentable innovations** and practical solutions for institutions and industry.
- **Development of Soft and Leadership Skills:** Foster **teamwork, critical thinking, complex problem-solving, adaptability to continuous technological advancement, discipline, and professional responsibility**, enabling students to work effectively in diverse academic and professional environments.
- **Technological Advancement and Sustainability:** Ensure the continuous and systematic modernization of **laboratory equipment, central computing servers, and course content** in alignment with local and international labor-market requirements and the rapid evolution of **Generative AI** and advanced **Artificial Intelligence** technologies.
- **Professional Readiness and Competitiveness:** Prepare students academically, technically, and professionally to participate successfully in **national examinations, competitions, and scientific hackathons** at both local and international levels through continuous hands-on applications, practical training, and specialized workshops.

4- Program Learning Outcomes

The **Program Learning Outcomes (PLOs)** for engineering programs, as established by the **Iraqi Council for Engineering Education**, require graduates to demonstrate the ability to:

GO1: Identify, define, formulate, and solve engineering problems by applying principles of **science, mathematics, and engineering**.

GO2: Develop innovative engineering designs that address diverse needs and constraints, including **health and safety, environmental, economic, and social considerations**.

GO3: Conduct appropriate and high-quality **experimentation and analysis**, interpret the resulting data, and apply sound **engineering judgment** to draw accurate and valid conclusions.

GO4: Communicate effectively through various methods with **individuals, teams, the public, and different levels of management**, according to the requirements and context of each situation.

GO5: Recognize and uphold **ethical and professional responsibilities** in engineering contexts, while considering the **environmental, economic, and social consequences** of engineering decisions and practices.

GO6: Demonstrate the ability to engage in **continuous learning** and continuously develop and enhance professional knowledge and competencies.

GO7: Work effectively as a member of an **integrated team** toward shared objectives and within defined timelines, ensuring the quality of work and adherence to established schedules.

Alignment of Program Learning Outcomes with Program Educational Objectives

Code	Program Learning Outcome (GO)	Alignment with Program Educational Objectives
G01	The ability to identify, define, formulate, and solve engineering problems by applying principles of science, mathematics, and engineering.	1, 2, 5
G02	The ability to develop innovative engineering designs that address diverse needs, including health and safety, environmental, economic, and social considerations.	1, 2, 6
G03	The ability to conduct appropriate and high-quality experimentation and analysis, interpret the resulting data, and apply sound engineering judgment to draw accurate and valid conclusions.	2, 6, 8
G04	The ability to communicate effectively through various methods with individuals, teams, the public, and different levels of management, according to the requirements and context of each situation.	3, 8
G05	The ability to recognize and uphold ethical and professional responsibilities in engineering contexts, while considering environmental, economic, and social consequences.	5, 7
G06	The ability to engage in continuous learning and continuously develop and enhance professional knowledge and competencies.	4, 5, 6, 7
G07	The ability to work effectively as a member of an integrated team toward shared objectives and within defined timelines, ensuring the quality of work and adherence to established schedules.	4, 5, 6, 7, 8

5- Program Accreditation

Has the program obtained program accreditation? If so, from which accrediting body?

The **Artificial Intelligence Engineering Department** is a newly established program, currently enrolling students in its **first academic stage**. The application for **engineering program accreditation** will be submitted upon the graduation of the program's **first cohort**, in accordance with the applicable accreditation requirements and procedures.

6- Other External Influences

Is there a sponsoring or supporting institution for the program?

Yes. The **Artificial Intelligence Engineering Department** has an academic twinning arrangement with the **Department of Artificial Intelligence Engineering, College of Artificial Intelligence Technology, University of Diyala**.

The program is also subject to the requirements of the **national standards established by the Iraqi Council for Engineering Education Accreditation**.

7- Program Structure

Program Structure Component	Number of Courses	Credit Units	Percentage	Remarks*
University Requirements	7	13	7%	Compulsory
College Requirements	2	8	4%	Compulsory
Department Requirements	28	159	89%	Compulsory or Elective
Summer Training	1	—	—	Compulsory
Other Requirements	—	—	—	—

* Remarks may indicate whether the course is compulsory or elective.

8- Program Description

Year / Level	Course Code	Course Title	Contact Hours
First Year / First Semester	MATH110	Mathematics I	3 Theory / – Practical
	URCOM1	Computer	2 Theory / 2 Practical
	DRAW120	Engineering Drawing I	– Theory / – Practical
	PHYS111	Physics	3 Theory / – Practical
	AIRE110	Discrete Logic	3 Theory / 2 Practical
	URDEM	Democracy and Human Rights	2 Theory / – Practical
	URARA	Arabic Language	2 Theory / – Practical
First Year / Second Semester	E 102	Mathematics II	3 Theory / – Practical
	AIE 103	Electrical Circuits	3 Theory / 2 Practical
	AIE 102	Computer Programming	3 Theory / 2 Practical
	AIE 106	Principles of Artificial Intelligence	3 Theory / 2 Practical
	AIE 107	Engineering Drawing II	– Theory / 3 Practical
	AIE109	Computer Skills	– Theory / 3 Practical
	UD11	English Language I	2 Theory / – Practical

9- Expected Learning Outcomes of the Program

The expected learning outcomes of the program are categorized into **Knowledge, Skills, and Values**, as follows:

Category	Learning Outcome	Description
Knowledge	GO1	The ability to identify, define, formulate, and solve engineering problems by applying principles of science, mathematics, and engineering .
Knowledge	GO2	The ability to develop innovative engineering designs that address diverse needs, including health and safety, environmental, economic, and social considerations .
Knowledge	GO3	The ability to conduct appropriate and high-quality experimentation and analysis , interpret the resulting data, and apply sound engineering judgment to draw accurate and valid conclusions.
Skills	GO4	The ability to communicate effectively through various methods with individuals, teams, the public, and different levels of management , according to the requirements and context of each situation.
Skills	GO6	The ability to engage in continuous learning and continuously develop and enhance professional knowledge and competencies.
Skills	GO7	The ability to work effectively as a member of an integrated team toward shared objectives and within defined timelines, ensuring the quality of work and adherence to established schedules.
Values	GO5	The ability to recognize and uphold ethical and professional responsibilities in engineering contexts, while considering the environmental, economic, and social consequences of engineering decisions and practices.

10- Teaching and Learning Strategies

- **Flipped Classroom:** Students review lectures and learning materials through videos or digital content outside the classroom, while classroom time is devoted to discussion, problem-solving, and practical application.
- **E-Learning:** The use of online platforms and digital applications to provide access to learning materials and facilitate interaction between students and instructors.
- **Blended Learning:** Integrating face-to-face instruction with online learning to enhance flexibility, accessibility, and learning effectiveness.
- **Problem-Based Learning (PBL):** Presenting students with authentic and challenging problems and encouraging them to investigate, analyze, and develop appropriate solutions.
- **Project-Based Learning:** Engaging students in comprehensive projects that integrate theoretical knowledge with practical application and develop their problem-solving and project management skills.
- **Multimedia Learning:** Using multimedia resources, including videos, animations, digital simulations, and interactive content, to enhance understanding and support different learning needs.
- **Adaptive Learning:** Using intelligent learning systems that dynamically adjust educational content, activities, and learning pace according to individual students' levels and progress.
- **Online Collaborative Learning:** Facilitating teamwork and peer interaction through digital tools such as online forums, virtual discussion rooms, and collaborative platforms.
- **Digital Inquiry-Based Learning:** Encouraging students to conduct digital research, collect and analyze information and data through online resources, and develop knowledge through inquiry and evidence-based investigation.

11- Assessment Methods

- **Formative Assessment:** Continuous assessment throughout the learning process through short quizzes, classroom activities, exercises, and discussions to monitor students' progress and provide timely feedback.
- **Summative Assessment:** Assessment conducted at the end of a course, unit, or semester through examinations, projects, and other comprehensive assessment activities.
- **Portfolio Assessment:** Collecting and documenting students' work over a specific period to evaluate their progress, development, and achievement of learning outcomes.
- **Performance Assessment:** Evaluating students through practical tasks such as experiments, oral presentations, demonstrations, and problem-solving activities.
- **Self-Assessment:** Enabling students to evaluate their own learning and performance based on clearly defined criteria and learning objectives.
- **Peer Assessment:** Engaging students in evaluating and providing constructive feedback on the work and performance of their peers.
- **E-Assessment:** Using digital platforms, online tools, and interactive examinations to assess students' knowledge, skills, and learning progress.
- **Rubric-Based Assessment:** Using clearly defined assessment criteria and performance levels to evaluate students' achievement in a transparent and consistent manner.
- **Adaptive Assessment:** Using assessment systems that dynamically adjust questions and levels of difficulty according to the individual student's performance and proficiency level.
- **Project-Based Assessment:** Assessing students through the completion of comprehensive projects that integrate theoretical knowledge with practical application and demonstrate the achievement of multiple learning outcomes.

12- Faculty Members

Academic Rank	Faculty Member	General Specialization	Specific Specialization	Employment Status
Assistant Lecturer	Cenaa Ghani Qaddouri	Computer Engineering	Artificial Intelligence	Permanent Staff
Assistant Lecturer	Saba Abdul Moneim Ali	Computer Science	Artificial Intelligence	Permanent Staff
Assistant Lecturer	Farah Raad Fadhil	Computer Science	—	Permanent Staff
Lecturer	Qusay Shihab Hamoud	Control and Systems Engineering	—	Lecturer
Assistant Lecturer	Hamdan Hamoud Shihab	Computer Engineering	—	Permanent Staff
Assistant Lecturer	Sarah Ahmed	Arabic Language Education	—	Permanent Staff
Lecturer	Azhar Musleh	Law	—	Permanent Staff
Assistant Lecturer	Noor Al-Huda Kareem	English Language Education	—	Permanent Staff
Lecturer	Rami Hussein Al-Hajj	Physics	—	Permanent Staff
Assistant Lecturer	Hind Saad Jawad	Communications Engineering	Networks	Permanent Staff
Assistant Lecturer	Osama Mohsen Abdulaziz	Control and Systems Engineering	—	Lecturer

13- Professional Development

Orientation and Development of New Faculty Members

- **Teaching Assignment Based on Specialization:** Faculty members shall be assigned to teach courses that are aligned with their academic qualifications and areas of specialization.
- **Commitment to Teaching Responsibilities:** Faculty members are expected to adhere to scheduled teaching hours, class timetables, and assigned academic responsibilities.
- **Promotion of Academic and Research Activities:** Faculty members are encouraged to continuously develop their expertise through academic and research activities, including **scientific publications, conferences, seminars, research projects**, and other scholarly activities.
- **Analysis of Student Achievement:** Faculty members shall analyze students' **success and failure rates** in the courses they teach and use the findings to identify areas for improvement in teaching and learning.
- **Enhancement of Qualifications and Training:** Faculty members are encouraged to continuously improve their academic qualifications, professional competencies, and training in ways that support their academic and professional development.
- **Participation in Professional Development Courses:** Faculty members are encouraged to attend relevant training and professional development courses, particularly those offered by the **Continuing Education Center**.
- **Laboratory Training:** Faculty members are required to undertake relevant training courses provided by the **Laboratories Department** before conducting practical sessions and working with students.

Professional Development of Faculty Members

This annual plan is based on a strategic vision aimed at empowering faculty members and enhancing their competitive capabilities through an integrated framework of contemporary programs and systematic mechanisms. The plan seeks to equip faculty members with advanced knowledge, specialized skills, and modern technologies required to enhance academic and institutional performance. This professional development enables faculty members to effectively fulfill their comprehensive professional roles in **teaching and learning environments, scientific research and innovation, administrative and leadership responsibilities, community engagement, and sustainable development.**

To achieve these objectives, the academic and professional development framework is structured around four main pillars:

Pillar 1: Updating Teaching and Learning Strategies

This pillar focuses on adopting modern, **student-centered teaching methodologies**, such as **Project-Based Learning** and **Flipped Learning**, and developing interactive learning environments that foster **critical thinking, creativity, and innovation.**

Pillar 2: Developing Learning Outcomes Assessment

This pillar focuses on enhancing academic measurement and assessment practices and developing objective assessment tools, such as **Rubrics**, to accurately and effectively measure the achievement of the intended learning outcomes (**ILOs**) at both the program and course levels.

Pillar 3: Continuous Professional Development of Faculty Members

This pillar aims to strengthen the individual and institutional capacities of faculty members through specialized **workshops and training programs** in areas such as **scientific research, international academic publishing, leadership skills, and university administration**, thereby promoting academic excellence and professional growth.

Pillar 4: Advancement and Development of the E-Learning System

This pillar supports the **digital transformation of higher education** by integrating digital learning technologies, managing **smart learning platforms**, and utilizing **Artificial Intelligence tools and interactive technologies** to facilitate the educational process and enhance **blended learning.**

14- Admission Criteria

Admission to the **Bachelor's Degree Program in Artificial Intelligence Engineering** is conducted through the **centralized admission system of the Iraqi Ministry of Higher Education and Scientific Research** and is subject to the following minimum requirements:

1. **Secondary School Qualification:** Applicants must hold an **Iraqi secondary school certificate** or an equivalent qualification. Applicants must achieve the minimum grade required for admission to **colleges of engineering**.
2. **Centralized Admission:** Admission is centrally administered and regulated by the **Ministry of Higher Education and Scientific Research** in accordance with the applicable national admission regulations.
3. **Allocation of Students:** Students are allocated among the **12 engineering departments of the College of Engineering at Al-Farabi University**, including the **Artificial Intelligence Engineering Department**, based on the approved capacity of each department, applicants' academic averages, and their preferences. The approved admission capacity of the **Artificial Intelligence Engineering Department** for the current academic year is **99 students**.
4. **Admission Capacity:** The number of admitted students is limited to the available seats determined by the **College Council**, based on the available human, academic, laboratory, and other institutional resources.
5. **Required Documentation:** Applicants must submit all required documents and supporting certificates within the specified admission period and in accordance with the applicable admission procedures.
6. **Applicants with Non-Iraqi Secondary Education:** Applicants who completed their secondary education outside Iraq must have completed **twelve years of primary and secondary education** at a recognized educational institution. They are also required to obtain an official **equivalency certificate from the Iraqi Ministry of Education**.

Admission to the **Artificial Intelligence Engineering Department** is highly competitive. Applicants are admitted through a comprehensive and merit-based selection process that considers their academic records and admission preferences, subject to the **maximum annual admission capacity** approved for the program.

15- Main Sources of Information about the Program

- The **official website of the University and the College of Engineering.**
- The **Artificial Intelligence Engineering Department's webpage** on the College's official website.
- The **Academic Guide of the College of Engineering** and the **Academic Guide of the Artificial Intelligence Engineering Department.**
- The **Academic Program Description and Course Catalog**, together with the **E-Learning Management System.**
- Relevant **committees of the Artificial Intelligence Engineering Department**, through official documents, reports, and institutional records.
- **Administrative files and records** maintained by the Artificial Intelligence Engineering Department.

16- Program Development Plan

First: Strategic Planning and Development of the Academic Identity

- **Developing the Strategic Direction:** Formulating and regularly updating the program's **vision, mission, and strategic objectives** in alignment with contemporary trends in higher education and the institution's strategic vision.
- **Market Gap Analysis:** Conducting periodic surveys and studies to identify **labor-market requirements** and analyzing performance evaluation questionnaires administered to students, graduates, and employers to ensure the program remains flexible and responsive to emerging needs and developments.

Second: Program Development and Modernization (Curriculum and Study Plans)

- **Curriculum Review and Updating:** Conducting periodic reviews of the study plans and updating the scientific content of courses in accordance with developments in the field.
- **Introducing Advanced Technical Courses:** Incorporating specialized courses that address the requirements of the **Fourth Industrial Revolution**, including **Artificial Intelligence (AI), Internet of Things (IoT), and Cybersecurity.**
- **Enhancing Laboratory Facilities:** Upgrading and equipping scientific laboratories with modern technologies and equipment to strengthen students' practical and applied learning.

Third: Updating Teaching, Learning, and Assessment Strategies

- **Adopting Active Learning Methodologies:** Implementing modern **student-centered teaching strategies**, such as **Flipped Learning** and **Project-Based Learning.**

- **Integrating Digital Technologies:** Utilizing specialized software, digital simulation systems, and interactive technologies in the educational process to facilitate the understanding and practical application of complex concepts.
- **Developing the Assessment System:** Moving toward **Performance-Based Assessment**, adopting academic **Portfolios**, and expanding the use of **E-Assessment** to enhance fairness, transparency, and objectivity in evaluating student achievement.

Fourth: Capacity Building and Continuous Professional Development

- **Faculty Professional Development:** Designing and implementing continuous training programs for faculty members to enhance their **pedagogical, technical, and professional competencies**.
- **Strengthening Scientific Research:** Supporting research activities, promoting **international academic publication**, and encouraging academic exchange programs and research partnerships with international universities and research institutions.

Fifth: Strategic Partnerships and Industry Engagement

- **Academic Twinning and Professional Agreements:** Establishing **Memoranda of Understanding (MoUs)** and strategic partnerships with leading technology companies and professional institutions.
- **Enhancing Field Training and Incubators:** Strengthening structured **summer training and field-training programs** for students and establishing university **business incubators** to support innovation, entrepreneurship, and an environment conducive to developing innovative graduation projects.

Sixth: Infrastructure and Digital Transformation

- **Upgrading Educational Facilities:** Continuously modernizing the infrastructure of **laboratories, classrooms, and educational facilities** to meet evolving academic and technological requirements.
- **Integrating Smart Learning Environments:** Developing and enhancing **E-Learning platforms** to support **blended and virtual learning** and provide flexible, technology-enabled educational experiences.

Seventh: Governance, Quality Assurance, and Continuous Improvement

- **Academic Alignment and Accreditation:** Aligning the program's **intended learning outcomes** with national and international **academic accreditation standards and requirements**.
- **Periodic Monitoring and Follow-Up:** Preparing periodic monitoring reports and conducting **self-assessment** to ensure sustained quality and the effective implementation of **Continuous Improvement** mechanisms.

Program Skills Matrix

Year / Level	Course Code	Course Title	Compulsory / Elective	Knowledge			Skills			Values
				GO1	GO2	GO3	GO4	GO6	GO7	GO5
First Year / First Semester	MATH110	Mathematics I	Compulsory	✓						
	URCOM1	Computer	Compulsory	✓	✓				✓	
	DRAW120	Engineering Drawing I	Compulsory	✓				✓		
	AIRE110	Discrete Logic	Compulsory	✓	✓	✓				
	PHYS111	Physics	Compulsory			✓				
	URDEM	Democracy and Human Rights	Compulsory				✓			✓
	URARA	Arabic Language	Compulsory				✓			

Year / Level	Course Code	Course Title	Compulsory / Elective	Knowledge			Skills			Values
				GO1	GO2	GO3	GO4	GO6	GO7	GO5
First Year / Second Semester	UD11	English Language I	Compulsory				✓			✓
	E 102	Mathematics II	Compulsory	✓			✓			
	AIE 103	Electrical Circuits	Compulsory		✓	✓		✓		
	AIE 102	Computer Programming	Compulsory	✓		✓	✓		✓	
	AIE 106	Principles of Artificial Intelligence	Compulsory		✓	✓		✓	✓	
	AIE 107	Engineering Drawing II	Compulsory	✓	✓			✓		
	AIE109	Computer Skills	Compulsory	✓				✓	✓	

First Year

Module Information			
معلومات المادة الدراسية			
Module Title	Discrete Logic		Module Delivery
Module Type	Core		☒ Theory Lecture ☒ Lab ☒ Tutorial Practical Seminar
Module Code	AIRE110		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level	UGx11 1	Semester of Delivery	2
Administering Department	Type Dept. Code	College	Type College Code
Module Leader	م.م فرح رعد فاضل	e-mail	Farah.raad@alfarabiuc.edu.iq
Module Leader's Acad. Title	lecturer	Module Leader's Qualification	Msc.
Module Tutor	Name (if available)	e-mail	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	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. To be able to deal with the number systems and codes. 2. To understand the functionality of logic gates. 3. To have the skill to use the logic gates in designing logic circuits. 4. To have the skill to simplify the digital circuits. 5. To learn the simplification process, Boolean expression, Demorgans law, and Karnaugh map. 6. To understand the principles for designing logic circuits. 7. To understand adder, subtractor, decoder, encoder, multiplexer, demultiplexer, and comparator circuits.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Recognize each type of number system. 2. Identify the process of converting between number systems. 3. Summarize the types of logic gates. 4. Discuss the use of each gate. 5. Describe the design of a logic circuit by using logic gates. 6. Explain the simplification processes. 7. Explain Boolean expression and Demorgan's law. 8. Explain the Karnaugh map for different numbers of bits. 9. Discuss the design of the logic circuit before and after simplification. 10. Explain the combinational logic circuit. 11. Identify the adder, subtractor, decoder, encoder, multiplexer, demultiplexer. 12. Identify the basic circuit elements and their applications. 13. Identify the basic concepts of flip flops and its applications in synchronous and asynchronous counters
Indicative Contents المحتويات الإرشادية	Indicative content includes the following.

	Number systems - decimal, binary, octal, hexadecimal number system, conversion, operation. [10 hrs] Codes- excess-3, gray code, conversions, operations, complements [5 hrs] Logic gates-NOT, AND, OR, NOR, NAND, XOR, XNOR. [5 hrs] Logic simplification- Boolean theorem and Demorgans law. [10 hrs] Karnaugh map-SOP, POS, and don't care. [15 hrs] Arithmetic operations Part A- adder, parallel binary adder, subtractor, adder-subtractor. [10 hrs] Arithmetic operations Part B- multiplexer, demultiplexer, decoder, encoder. [10 hrs] Flip Flops types and applications [4] Synchronous and Asynchronous Counters [6]
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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 while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials, and by considering the type of simple experiments involving some interesting sampling activities for the students.

Student Workload (SWL) الحمل الدراسي للطلاب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	79	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعياً	5
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	71	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعياً	5
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب 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 / Lab.	7	15% (15)	Continuous	
	Report	1	5% (5)	13	LO # 5, 8 and 10
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO # 1-7
	Final Exam	4hr	50% (40+10)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Number systems (decimal, binary, octal, conversions, operations)
Week 2	Number systems (hexadecimal, BCD, conversions, operations)
Week 3	Number systems (excess-3, gray code, conversions, operations, complements)
Week 4	Logic gates (AND, OR, NOT, NAND, NOR, XOR, XNOR)
Week 5	Logic simplification (Boolean theorem)
Week 6	Logic simplification (Demorgan's theorem)
Week 7	Karnaugh maps (2-variables, 3-variables)
Week 8	Karnaugh maps (4-variables (SOP, POS, don't care))
Week 9	Karnaugh maps (5-variables, (SOP, POS, don't care))
Week 10	Arithmetic operations (adder, parallel binary adder)
Week 11	Arithmetic operations (subtractor, adder-subtractor circuit)
Week 12	Arithmetic operations (decoder, encoder)
Week 13	Arithmetic operations (Multiplexer, Demultiplexer)
Week 14	Flip-flop types and operation
Week 15	Synchronous and Asynchronous Counter
Week 16	Preparatory week before the Final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: logic gates (NOT, AND, OR)
Week 2	Lab 2: Logic gates (NOR.NAND)
Week 3	Lab 3: Logic gates (XOR, XNOR)
Week 4	Lab 4: Boolean theorem

Week 5	Lab 5: Demorgan's law
Week 6	Lab 6: Karnaugh map
Week 7	Lab 7: SOP
Week 8	Lab 8: POS, don't care
Week 9	Combinational circuit (half adder, full adder)
Week 10	Combinational circuit (Half subtractor, full subtractor)
Week 11	Decoder and Encoder circuits
Week 12	Multiplexer and Demultiplexer circuits
Week 13	Flip Flop Latch
Week 14	Counters

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	Digital Fundamentals by Floyed	Yes
Recommended Texts	Digital circuit analysis and design with Simulink modeling by Steven T. Karris	No
Websites	https://www.coursera.org/browse/physical-science-and-engineering/computer-engineering	

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	Physics		Module Delivery		
Module Type	Basic		☒ Theory ☐ Lecture Lab ☒ Tutorial ☐ Practical ☐ Seminar		
Module Code	PHYS111				
ECTS Credits	5				
SWL (hr/sem)	125				
Module Level		1	Semester of Delivery		2
Administering Department		AI. Eng.	College	College of Engineering	
Module Leader	م.د رامي حسين الحاج		e-mail		
Module Leader's Acad. Title			Module Leader's Qualification		
Module Tutor			e-mail		
Peer Reviewer Name			e-mail		
Scientific Committee Approval Date		06/11/2025	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

The aims of this subject are to:

1. Provide, through well-designed studies of experimental and practical physics, a worthwhile educational experience for all students, whether they go on to study science beyond this level and to enable them to acquire sufficient understanding.
2. Develop abilities and skills that are relevant to the study and practice of science and are useful in everyday life.
3. Develop attitudes relevant to science such as concern for accuracy and precision, objectivity, integrity, etc.
4. Stimulate interest in and care for the local and global environment.
5. Promote an awareness that the study and practice of science are cooperative and cumulative activities and are subject to social, economic, technological, ethical, and cultural influences and limitations.
6. The applications of science may be beneficial and detrimental to the individual, the community, and the environment.
7. The use of information technology is important for communications, as an aid to experiments, and as a tool for the interpretation of experimental and theoretical results.

Module Learning Outcomes

The learning outcomes for studying general physics are:

1. Understanding Fundamental Concepts: Students will develop a solid understanding of fundamental physics concepts, including physical quantities, units, and measurement, as well as key principles governing motion, forces, and energy.
2. Problem-Solving Skills: By studying kinematics and dynamics, students will acquire the ability to analyze and solve problems related to motion, forces, and the behavior of physical objects.
3. Conceptual Mastery: Students will master key concepts such as mass, weight, density, and the turning effect of forces, enabling them to apply these principles to real-world situations.
4. Pressure, Energy, Work, and Power: Learners will gain a comprehensive understanding of pressure, energy, work, and power and be able to calculate and apply these concepts to various physical systems.
5. Motion in Different Dimensions: Students will be able to analyze and describe the motion of objects in one, two, or three dimensions, allowing them to tackle more complex real-world scenarios.
6. Newton's Laws of Motion: Learners will comprehend and apply Newton's

	three laws of motion, providing them with the foundation for understanding and predicting the behavior of objects under the influence of forces. 7. Understanding Wave Properties: Students will gain a deep understanding of the general properties of waves, including wave mechanics, wave interference, and wave behavior, which are vital in various areas of physics. 8. Exploration of Light: A thorough understanding of the nature and properties of light, including its behavior, reflection, refraction, and dispersion, will be achieved. 9. Electromagnetic Spectrum: Students will learn about the electromagnetic spectrum, its different regions, and the practical applications of various types of electromagnetic waves. 10. Sound and Hearing: A comprehensive understanding of the physics of sound, including wave characteristics, propagation, and its perception by the human ear, will be attained. 11. Electromagnetism: The course will enable students to understand the relationship between electricity and magnetism, including electromagnetic induction, electromotive force, and the applications of electromagnetism in technology.
Indicative Contents	Indicative content includes the following: 1- Measurements - Introduction to Physical Quantities - Units and Measurement 2- Newtonian Mechanics - Kinematics - Dynamics, Mass - Weight and Density - Turning Effect of Forces - Pressure - Energy, Work and Power 3- Waves - General Wave Properties - Light - Electromagnetic Spectrum - Sounds 4- Electricity and Magnetism - Static Electricity & Practical Electricity - Magnetism & Electromagnetism

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, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.
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Student Workload (SWL)

Structured SWL (h/sem)	79	Structured SWL (h/w)	5
Unstructured SWL (h/sem)	46	Unstructured SWL (h/w)	3
Total SWL (h/sem)	125		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	5, 10	LO #1-4 and 5,6
	Assignments	2	10% (10)	2, 12	LO # 1, 2 and 9
	Projects / Lab.	8	15% (15)	Continuous	
	Report	1	5% (5)	13	LO # 10
	Midterm Exam	2hr	10% (10)	7	LO # 1-6

Summative assessment	Final Exam	3hr	40% (50)	16	All
	Final Lab Exam	1hr	10% (10)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction Physical Quantities, Unites and Measurement • Dimensions and Units • Dimensional Analysis • Conversion of Units
Week 2	Kinematics and Dynamics • Reference Frames and Displacement • Average Velocity • Instantaneous Velocity • Acceleration • Motion at Constant Acceleration • Freely Falling Objects • Force and Motion • Collisions and Impulse • Projectile Motion
Week 3	Mass, weight and Density • Definition of Mass • Units and Law of Mass • Definition of Weight • Units and Law of Weight • Definition of Density • Units and Law of Density • Specific gravity

Week 4	Turning Effect of Forces • Moment of a Force • Principle of Momentum • Conditions of Equilibrium
Week 5	Pressure, Energy, Work, and Power • Definition of Pressure • Units and Law of Pressure • Pressure in Liquids
	• Definition of Energy • Units and Law of Energy • Kinetic energy • Potential Energy • Definition of Work • Units And Law Of Work • Definition of Power • Units and Law of Power
Week 6	Motion Along a Straight Line • Displacement, Time, and Average Velocity • Motion • Position and Displacement • Average Velocity and Average Speed
Week 7	Motion in Two or Three Dimensions • Position and Velocity Vectors • Acceleration Vector • Projectile Motion
Week 8	Newton's Laws of Motion • Newton's First Law • Newton's Second Law • Newton's Third Law
Week 9	Mid Term Exam

Week 10	General Wave Properties • Mechanical Waves • Transverse waves • Longitudinal waves • Surface waves • Measuring a Wave
Week 11	Light • Introduction • Definition of Light
	• What is of Light • Properties of Light • Application of Light
Week 12	Electromagnetic Spectrum • Definition of Electromagnetic Spectrum • Type of Electromagnetic Spectrum • Detecting Electromagnetic Waves from Space • Energy in Electromagnetic Waves
Week 13	Sounds and Hearing • Definition of Sound and Hearing • Speed of Sound, Frequency and Wavelength • Sound Intensity and Sound Level • Definition of Hearing • The Hearing Mechanism
Week 14	Magnetism • Introduction • The Source of All Magnetism • Universal Characteristics of Magnets and Magnetic Poles • Earth's Magnetic Poles • Types of Magnetism

Week 15	Electromagnetism • Introduction • Faradays Law • Emf induced in a moving conductor • Energy stored in a magnetic field
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Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	Experiment 1: Dynamics – Force, Newton’s Three Laws, and Friction
Week 2	Experiment 2: Investigating the Laws of Motion with a Simple Pendulum

Week 3	Experiment 3: Tuning Fork
Week 4	Experiment 4: Equilibrium of a Rigid Body
Week 5	Experiment 5: Determining Hooks law
Week 6	Experiment 6: Verifying Newton's Third Law with Colliding Objects
Week 7	Experiment 7: Investigating Wave Properties - Wavelength, Frequency, and Speed
Week 8	Experiment 8: Refraction of Light in Different Media

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Fundamentals of Physics, by David Halliday, Jearl, Walker, and Robert Resnick, Wiley	
Recommended Texts	Seraway, _Physics_for_Scientists_and_Engineers_6E_ by Serway and Jewett	
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

Module Information			
معلومات المادة الدراسية			
Module Title	COMPUTER		Module Delivery
Module Type	CORE LEARNING ACTIVITY		Class Lecture + Lab.
Module Code	URCOE1		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	1	Semester of Delivery	1
Administering Department	Artificial Intelligence Engineering	College	Engineering
Module Leader		e-mail	
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name	م.م سينا غني قدوري	e-mail	Sina.quduri@alfarabiuc.edu
Review Committee Approval		Version Number	

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.

Student Workload (SWL)			
الحمل الدراسي للطالب			
Structured SWL (h/sem)	62	Structured SWL (h/w)	4
Unstructured SWL (h/sem)	63	Unstructured SWL (h/w)	4
Total SWL (h/sem)	125		

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Module Evaluation تقييم المادة الدراسية					
		Time/ Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment					
Summative assessment	Mid Exam	1	10% (10)		
	Final Exam	3 hrs.	50% (50)		
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
Week	Material Covered

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	The Development of the Personal Computer
Week 2	Processor Types
Week 3	Memory (ROM, RAM)
Week 4	Motherboards and Bios
Week 5	External I/O Interface
Week 6	Digital Number Systems
Week 7	Midterm Exam
Week 8	Digital Number Systems: part1
Week 9	Digital Number Systems: part2
Week 10	Digital Number Systems: Part 3
Week 11	The Architecture of Logic

Learning and Teaching Resources

Required Texts	Text	Available in the Library?
Required Texts	The Intel microprocessors 8086/8088, 80186/80188 , 80286, 80386, 80486, Pentium, Pentium Pro processor, Pentium II, Pentium III, Scott Mueller, "UPGRADING AND REPAIRING PCs", 20th edition, 2012. amming, and interfacing / Barry B. Brey—8th ed.	
Recommended Texts	The Intel microprocessors 8086/8088, 80186/80188 , 80286, 80386, 80486, Pentium, Pentium Pro processor, Pentium II, Pentium III, Pentium 4, and Core2 with 64-bit extensions: architecture, programming, and interfacing / Barry B. Brey—8th ed.	
Websites		

Week 12	Introduction to Programming in C++: Part1
Week 13	Introduction to Programming in C++: Part2
Week 14	Review
Week 15	Final Exam

Module Information			
معلومات المادة الدراسية			
Module Title	Mathematics 1		Module Delivery
Module Type	Support		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	MATH110		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level	1	Semester of Delivery	
Administering Department	Artificial Intelligence Engineering	College	College of Engineering
Module Leader		e-mail	
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name	م.م هند سعد	e-mail	Hind.saad@alfarabiuc.edu
Scientific Committee Approval Date		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	General Objectives of Teaching Mathematics The overall objective of education is to prepare individuals for both personal and professional life, enabling them to contribute effectively to the development of society and to achieve personal growth. The general objectives of teaching Mathematics are to: • Enhance students' proficiency in Mathematics and improve their overall academic performance. • Develop students' abilities in deduction, generalization, and logical reasoning. • Enable students to understand fundamental mathematical concepts, including relations, functions, trigonometric functions, differentiation, integration, and probability. • Develop students' understanding of mathematical proofs and their underlying logical principles. • Familiarize students with fundamental mathematical structures and systems, such as groups and matrices. • Develop students' appreciation of Mathematics and their awareness of its significant applications in everyday life and various professional fields. • Demonstrate the practical applications of mathematical concepts and engineering principles, highlighting the importance of Mathematics as a fundamental component of engineering education.
Module Learning Outcomes	Knowledge and Understanding 1. The course content has been restructured and organized in a more logical sequence consistent with the curriculum, with the aim of providing clear, relevant, and engaging Calculus content for future engineers and scientists. 2. In addition to introducing the fundamental transcendental functions, these functions are integrated throughout subsequent chapters through appropriate examples and exercises to reinforce students' understanding and practical application. 3. Enable students to develop a sound understanding of the mathematical language and terminology required to apply Calculus concepts to a wide range of applications in science and engineering.
Indicative Contents	

Learning and Teaching Strategies

Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials and by considering types of simple experiments involving some sampling activities that are interesting to the students.
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Student Workload (SWL)			
Structured SWL (h/sem)	60	Structured SWL (h/w)	4
Unstructured SWL (h/sem)	87	Unstructured SWL (h/w)	5.8
Total SWL (h/sem)	175		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Determinates, Matrix, properties, operations
Week 2	Review of functions
Week 3	Limits
Week 4	Continuity
Week 5	Derivatives: Differentiation Rules
Week 6	Derivatives of Trigonometric Functions
Week 7	Derivatives of Inverse Functions and Logarithms
Week 8	Inverse Trigonometric Functions
Week 9	Related Rates
Week 10	Applications of Derivatives: Extreme Values of Functions, The Mean Value Theorem
Week 11	Monotonic Functions and the First Derivative Test
Week 12	Concavity and Curve Sketching
Week 13	Indeterminate Forms and L'Hôpital's Rule
Week 14	Applied Optimization
Week 15	Applied Optimization
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Weir, M., Hass and Giordano. (2008). Thomas' Calculus. Eleventh Edition, Pearson-Addison-Weesley.	Y
Recommended Texts	Howard, A. et. Al. (2008). Calculus. McGraw-Hill	Y
Websites		

Module Information					
Module Title	ARABIC LANGUAGE 1			Module Delivery	
Module Type	BASIC			Theory	
Module Code	URARA				
ECTS Credits	2				
SWL (hr/sem)	50				
Module Level		2	Semester of Delivery		3
Administering Department		Artificial Intelligence Engineering	College	Engineering	
Module Leader			e-mail		
Module Leader's Acad. Title		Lecturer	Module Leader's Qualification		MA
Module Tutor	None		e-mail	None	
Peer Reviewer Name		م.م سارة احمد	e-mail	Sarah. Ahmed @alfarabiuc.edu.iq	
Review Committee Approval			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	General Objectives of Teaching Arabic Language - Promote the Arabic language and preserve its linguistic accuracy by avoiding common grammatical and linguistic errors. - Enable students to use the Arabic language correctly in communicating with others through speaking, writing, listening, and reading, thereby facilitating their daily affairs and enabling them to effectively fulfill their needs and interests. - Develop students' ability to express themselves and describe what they perceive through oral and written communication. - Enrich students' linguistic repertoire by introducing them to a variety of vocabulary, expressions, and language structures. - Help students identify common linguistic errors and guide them toward appropriate correction. - Foster students' interest in reading and independent learning. - Enable students to recognize the aesthetic features of the Arabic language and its literature. - Develop students' ability to engage with and appreciate Arab cultural heritage, while establishing connections between it and various fields of knowledge and culture. - Enable students to apply Arabic grammar rules in reading and writing through exercises related to the proposed topics.		
	Learning Outcomes		
Module Learning Outcomes	Learning Outcomes - Develop students' appreciation of the Arabic language and their sense of pride in its linguistic and cultural heritage. - Train students in correct pronunciation, effective oral delivery, and clear verbal expression, while enriching their linguistic repertoire through a wide range of vocabulary, expressions, sentence structures, and language styles that enhance their cultural awareness. - Develop students' ability to spell and write Arabic words correctly, reinforce accurate word forms in their memory, and enable them to retrieve and apply these forms appropriately during writing. - Enable students to identify more than fifty common linguistic errors and recognize the appropriate forms for correcting them. - Enable students to distinguish between the different forms of the Hamza, including the initial, medial, and final Hamza, and to write each form correctly without common spelling errors.		

	6. Improve students' linguistic accuracy and fluency , protect them from common language errors, and develop sound linguistic habits that enable them to use words and sentences correctly while preserving the clarity, elegance, and expressiveness of Arabic
Indicative Contents	Indicative Contents The Origin and Development of the Arabic Language The Importance of the Arabic Language, with emphasis on its significance for non-specialist students. Parts of Speech, including inflected and indeclinable nouns and verbs. Common Linguistic Errors and methods of identifying and correcting them. Hamzat al-Qat' and Hamzat al-Wasl. The Orthography of the Medial and Final Hamza. Letters Added in Arabic Spelling. Punctuation Marks in the Arabic Language. Numbers and the Rules of Writing Numbers in Arabic. The Subject (Mubtada') and Predicate (Khabar). Types of Plurals and Their Related Forms. A Poem by a Classical Arabic Poet. A Poem by a Modern Arabic Poet. The Use of "An" (أَنْ) and "Inna" (إِنَّ) and the Distinction Between Them. The Correct Use of تاء مربوطة, ظ, ض, and هاء in Arabic Writing.
Learning and Teaching Strategies	
Strategies	- Lectures. - Tutorials. - Homework and Assignments. - Tests and Exams. - In-Class Questions and Discussions. - Extracurricular Activities. - Seminars. - In- and Out-Class oral conversations.

Delivery Plan (Weekly Syllabus)

	Material Covered
Week 1	نشأة اللغة العربية
Week 2	درس بيان أهمية اللغة العربية بصورة عامة وأهميتها لطلاب غير الاختصاص
Week 3	أقسام الكلام والمعرّب والمبني من الأسماء والأفعال
Week 4	همزة القطع والوصل
Week 5	رسم الهمزة المتوسطة والمتطرفة
Week 6	الأغلاط اللغوية الشائعة
Week 7	علامات الترقيم
Week 8	الحروف التي تزداد في الكتابة
Week 9	العدد، قواعد كتابة العدد
Week 10	أنواع الجموع وما يلحق بها
Week 11	ان المفتوحة والمكسورة
Week 12	المبتدأ والخبر
Week 13	قصيدة لشاعر قديم
Week 14	قصيدة لشاعر حديث
Week 15	كتابة الظاء والضاد والتاء المربوطة والهاء
Week 16	Final Exam

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	مصطفى التوني، الهمزة في اللغة العربية دراسة لغوية. سعد بن علي بن محمد ، الفرق بين الضاد والطاء. اللغة العربية العامة لأقسام غير الاختصاص . عبد القادر أمين	Yes
Recommended Texts	يوسف عطا الطريفي الواضح في الاملاء وعلامات الترقيم محمد العدناني، معجم الاغلاط اللغوية	No
Websites		

Module Information			
معلومات المادة الدراسية			
Module Title	Engineering Drawing		Module Delivery
Module Type	Support learning activities		☐ Theory ☐ Lecture ☐ Tutorial ☒ Practical ☐ Seminar
Module Code	AIE 107		
ECTS Credits	4		
SWL (hr/sem)	100		
Module Level	1	Semester of Delivery	
Administering Department	Al. Eng.	College	College of Engineering
Module Leader	م.م اسامه محسن عبدالعزيز	e-mail	usama.mohsin@alfarabiuc.edu.iq
Module Leader's Acad. Title	Lect.	Module Leader's Qualification	Asst.Lec
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	10/11/2025	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 Objectives أهداف المادة الدراسية	1. The students obtain knowledge and understanding in the subject of engineering drawing by using the computer through the AutoCAD program 2. Understanding and teaching students the basics of engineering drawing related to computer engineering 3. Knowing the correct methods of engineering drawing using the computer and how to apply them in the AutoCAD program in the field of computer engineering 4. Increasing the student's experience in identifying drawing, designing engineering, electronic shapes, and electrical circuits. 5. Easy to publish, and give the drawing on people across the globe just in a second.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Explain why CAD software is now replacing traditional pencil drawing. 2. Explain commands and AutoCAD's user interfaces, description of menu Bar and toolbars of AutoCAD 3. Recognize how AutoCAD defines the position of points with coordinates and specify the angle in AutoCAD 4. Explain How to draw lines, circles, Ellipses, Rectangles and arcs using precise methods 5. Learn editing commands: copy, cut, paste, erase, move, selecting objects, orthogonal projection, ISO drawing. 6. Developing the students' practical, theoretical and creative abilities in computer design techniques of various types. CAD Electrical, drawing electrical symbols on simple architectural plans
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <u>Part A – AutoCAD interfaces</u>

	The use of CAD in engineering drawing, description of menu Bar and toolbars [6 hrs] <u>Part B – Drawing</u> Drawing Ellipse, Rectangle, line, Ray, Circle, point, Arc, ----- etc. [24 hrs] <u>Part C – Editing Commands and CAD Electrical</u> CAD Electrical, the use of various layers, drawing electrical symbols on simple architectural plans, editing commands: copy, cut, paste, erase, move, selecting objects, orthogonal projection, ISO drawing. [15 hrs]
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Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, homework's and examples. Practical examples helps students to understand the course material.

Student Workload (SWL) الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	48	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب اسبوعيا	3.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	52	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب اسبوعيا	3.5
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	100		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (5)	7 and 12	LO #1 to #4 and #5, #6
	Assignments	2	10% (5)	4 ,6 and 13	LO #1 to #3 and #4 to #6
	Practice/lab	1	10% (10)	Continuous	All
	Participation & Attendance	1	10% (10)	Continuous	All
Summative assessment	Midterm Exam	2hr	10% (10)	8	LO #1 to #4
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered
Week 1	The use of CAD in engineering drawing
Week 2	description of menu Bar and toolbars
Week 3	Line, point
Week 4	Rectangle
Week 5	Circle
Week 6	drawing Ellipse
Week 7	Arc, ----- etc.
Week 8	editing commands
Week 9	copy, cut
Week 10	paste, erase

Week 11	move
Week 12	selecting objects
Week 13	selecting objects
Week 14	CAD Electrical selecting objects
Week 15	Mechanical/ Special features The use of various layers selecting objects
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts	- AutoCAD 2019 Beginning and Intermediate - The benefits of using the electrical toolset in AutoCAD	pdf
Recommended Texts	Any other materials available on the web.	No
Websites	https://www.youtube.com/playlist?list=PLHCD1a8sIQtbEKJawJL9qQaY5P9SgCUX	

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	Democracy & Human Rights		Module Delivery		
Module Type			☑ Theory		
Module Code	URDEM				
ECTS Credits					
SWL (hr/sem)					
Module Level	1	Semester of Delivery	1		
Administering Department	Al. Eng.	College	College of Engineering		
Module Leader	م.د. ازهر مصلح	e-mail	Hbeeb saleh@mtu.edu.iq		
Module Leader's Acad. Title	Assistant Lecturer	Module Leader's Qualification	PhD.		
Module Tutor		e-mail	Azhar.musleh@alfarabiuc.edu.iq		
Peer Reviewer Name					
Scientific Committee Approval Date	19/12/2025	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
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أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	Course objectives: 1- The graduate engineer will be introduced to human rights and basic freedoms 2- He should be an engineer with a general culture through which he can manage work that is subject to the standards of human rights and freedoms 3- Be active in society and be able to participate in national political events, as a candidate, voter, official 4- Get acquainted with the mechanisms of democracy, elections, and how to participate in them 5- Get acquainted with the laws and regulations that protect human rights and basic freedoms 6- Sharing the community's concerns for patriotism
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- Explaining human rights and freedoms 2 – Understanding the historical dimension of the development of the concept of human rights 3 – Explaining the religious impact in perpetuating the issue of human rights 4- Teaching students international, regional and local laws and instruments (constitutions) regulating human rights and basic freedoms. 5 -Understanding the International and local guarantees for the enforcement of human rights 6 – Knowing the concept of freedom and its types 7 – Knowing the meaning of Democracy, its concept, types, and applications 8- the goal of Elections, implementation mechanisms, methods of rigging them 9- Knowing Election laws 10- Evaluating the democratic experience in Iraq after 2003

Learning and Teaching Strategies	استراتيجيات التعلم والتعليم
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By theoretical Lectures and showing examples from around the world

Student Workload (SWL)				الحمل الدراسي للطالب
Structured SWL (h/sem)	33	Structured SWL (h/w)	2	

الحمل الدراسي المنتظم للطلاب خلال الفصل		الحمل الدراسي المنتظم للطلاب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	50		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	15% (15)	5, 10, 12	LO #1, 2, 10 and 11
	Assignments	2	15% (15)	2, 12	LO # 3, 4, 6 and 7
	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 1-15	1- Why human rights, the concept of human rights 2- The history of human rights in ancient civilizations 3- Human rights in monotheistic religions, Islam as a model 4- Human rights in the Middle Ages 5- The role of revolutions and thinkers in human rights 6- Human rights in the modern era, the League of Nations, the United Nations 7- Mid term Exam + The Universal Declaration and international human rights covenants and instruments 8- Human rights in regional agreements 9- Human rights in international non-governmental organizations 10- International guarantees for human rights and the role of the High Commissioner 11- Financial and administrative corruption and its role in obstructing the enforcement of

	human rights
	12- Terrorism
	13- Public freedoms, concept, types
	14- Democracy, its types, implementation mechanisms, elections
	15- Preparing for the final exam

Learning and Teaching Resources			مصادر التعلم والتدريس
	Text	Available in the Library?	
Required Texts	Binding prepared by Assistant Professor Hbeeb saleh	Yes	
Recommended Texts	United Nations Library.	yes	
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 Information					
معلومات المادة الدراسية					
Module Title	English Language1		Module Delivery		
Module Type	Basic		☒ Theory Lecture Lab ☐ Tutorial Practical ☐ Seminar		
Module Code	UD11				
ECTS Credits	2				
SWL (h/sem)	50				
Module Level		UGx111	Semester of Delivery		1
Administering Department		Artificial Intelligence Engineering	College	Engineering	
Module Leader	Hind Mohammed Abed		e-mail	hind.m@uobaghdad.edu.iq	
Module Leader's Acad. Title		Asst. lect.	Module Leader's Qualification		Master of Arts in Linguistics
Module Tutor			e-mail	E-mail	
Peer Reviewer Name		م.م نور الهدى	e-mail	noralhadi.kariem@alfarabiuc.edu.iq	
Scientific Committee Approval Date			Version Number		

Relation with other Modules			
Prerequisite module	none	Semester	
Co-requisites module	none	Semester	

Module Aims, Learning Outcomes and Indicative Contents	
Module Aims	1- The integrated skills approach of the course develops the student's self-confidence to communicate and express themselves freely. 2- This academic programme aims at enhancing students' Linguistic skills, understanding the vocabularies and grammar of language. This would help developing the students' skills and enriching their experience and make them able to communicate easily.
Module Learning Outcomes	A1) Figuring out information about vocabulary, pronunciation, usage, and grammar in reference texts, online resources, and English language dictionaries, (A2) Develop conversational skills for becoming a contributing participant in small group activities, large group discussions, and oral presentations, (A3) Understand texts using effective learning strategies for reading and vocabulary building,
Indicative Contents	Speaking, reading and writing

Learning and Teaching Strategies

Strategies	In order to build the character of the college students in in their specialty and at the English language subject, and for enhancing the students' linguistic skills (reading, writing, speaking and listening) as well as developing such skills to enable them of practicing the language on daily basis ; number of strategies have been followed:
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- Textbook material.
- Discussion and interaction during lectures
- Reading passages and dialogues from different sources to develop their reading and listening skills.
- Easily and thoroughly explain lessons with the participation of students to ensure their understanding and make them able to communicate with each other easily without hesitation.

Written quizzes help in developing the writing skills
And nourish their thinking and expression abilities.

Student Workload (SWL)

Structured SWL (h/sem)	63	Structured SWL (h/w)	
Unstructured SWL (h/sem)	27	Unstructured SWL (h/w)	
Total SWL (h/sem)	90		

Module Evaluation

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	20% (20)	5, 10	1,2
	Assignments	2	10% (10)	2, 12	3,1
	Projects / Lab.	0	0	0	0
	composition	1	10% (10)	13	3,1
Summative assessment	Midterm Exam	2 hr	10% (10)	7	1,2
	Final Exam	2hr	50% (50)	16	All

Total assessment	100% (100 Marks)		
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Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Unit 1,2 conversation and writing skills measured
Week 2	Unit 3,4 plus writing composition
Week 3	Unit 5,6 plus reading activities
Week 4	Unit 7,8 reading and conversation activities
Week 5	Unit 9,10 conversation activities
Week 6	Unit 11 conversation activities
Week 7	Unit 12 conversation activities
Week 8	Unit 13 conversation activities
Week 9	Unit 14 conversation activities
Week 10	Different activities (reading, writing, conversation)
Week 11	Composition Writing
Week 12	Different activities (reading, writing, conversation)
Week 13	Presenting their projects + discussion
Week 14	Presenting their projects + discussion
Week 15	Different activities (reading, writing, conversation and Presenting their projects + discussion
Week 16	Different activities (reading, writing, conversation)

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	(1) New Headway Plus [Beginner] by John and Liz Soars, Oxford: Oxford University Press (2006) (hard cover or Pdf version), (2) Modern scientific articles from the news related to the students' specialty, and (3) Internet links and videos related to the topics discussed in General English and English for Specific Purposes lectures.	No

Recommended Texts	Morphy,A.J (1983) English Grammar in use. Cambridge:CUP, Collins English for Exams Reading for IELTS by Els Van Geyte and Rona Snelling (2019).	No
Websites	https://www.bbc.co.uk/learningenglish/ any websites for learning English on social media and podcasts.	

Module Information					
Module Title	ELECTRICAL CIRCUITS		Module Delivery		
Module Type	CORE		Class Lecture + Lab.		
Module Code	AIE103				
ECTS Credits	5				
SWL (hr/sem)	125				
Module Level		1	Semester of Delivery		1
Administering Department		Artificial Intelligence Engineering	College	Engineering	
Module Leader	م.م حمدان حمود شهاب		e-mail	Hamdan.hmooud@alfarabiuc.edu.iq	
Module Leader's Acad. Title			Module Leader's Qualification		Ph.D.
Module Tutor			e-mail		
Peer Reviewer Name		م.م حمدان حمود شهاب	e-mail	Hamdan.hmooud@alfarabiuc.edu.iq	
Review Committee Approval			Version Number		1.0

Relation With Other Modules			
Prerequisite module	None	Semester	
Co-requisites module	COE101 Mathematics 1	Semester	1
Module Aims, Learning Outcomes and Indicative Contents			
Module Aims أهداف المادة الدراسية	1. Understanding Basic Electrical Concepts: To provide students with a		

	comprehensive understanding of fundamental electrical concepts, including current, voltage, resistance, and conductance. 2. Applying Ohm's Law and Kirchhoff's Laws: To enable students to apply Ohm's Law and Kirchhoff's Laws in analyzing electrical circuits. 3. Exploring Temperature Effects and Resistor Types: To familiarize students with the effects of temperature on resistance and the various types of resistors and their applications. 4. Analyzing Series and Parallel Circuits: To develop students' ability to analyze and solve problems related to series and parallel circuits. 5. Understanding Source Grouping and Conversion: To teach students how to group and convert electrical sources and understand the role of dependent sources. 6. Mastering Circuit Analysis Techniques: To provide in-depth knowledge and practical skills in using various circuit analysis methods, including branch current, mesh, and nodal analysis. 7. Utilizing Superposition, Thevenin's, and Norton's Theorems: To equip students with the ability to simplify and analyze complex circuits using superposition, Thevenin's, and Norton's theorems. 8. Maximizing Power Transfer and Performing Transformations: To understand the principles of maximum power transfer and perform Y-Δ and Δ-Y transformations. 9. Introducing Circuit Simulation Tools: To introduce students to modern software tools for circuit simulation and design, preparing them for practical applications in engineering.
Module Learning Outcomes	1. Explain Basic Electrical Concepts. 2. Apply Ohm's Law and Kirchhoff's Laws.: Utilize Ohm's Law and Kirchhoff's Laws to analyze and solve electrical circuit problems. 3. Analyze the Effects of Temperature on Resistance. 4. Solve Series and Parallel Circuits, Interpret Open and Short Circuits: Understand the effects of open and short circuits within electrical networks and their implications on circuit functionality. 5. Perform Circuit Analysis Using Various Methods: Apply branch current, mesh, and nodal analysis methods to determine currents, voltages, and other parameters in electrical circuits. 6. Utilize Superposition, Thevenin's, and Norton's Theorems: Simplify and analyze complex electrical circuits using superposition, Thevenin's, and Norton's theorems. 7. Maximize Power Transfer and Perform Transformations. 8. Use Circuit Simulation Software: Demonstrate proficiency in using modern software tools for circuit simulation and design, integrating theoretical knowledge with practical application.
Indicative Contents	Basics of Electricity ● Introduction to electric current ● Voltage difference and electromotive force (EMF) ● Resistance and resistivity: concepts and definitions ● Conductance and conductivity: relationships and calculations

Fundamental Laws and Concepts

- Ohm's law: understanding and applications
- Linear resistance: properties and examples
- Non-linear resistance: characteristics and examples

Temperature and Resistors

- Temperature effects on resistance: positive and negative temperature coefficients
- Types of resistors: fixed, variable, and special resistors
- Color coding of resistors: decoding and calculations

Basic Circuit Analysis

- Series circuits: properties, voltage and current distribution
- Parallel circuits: properties, voltage and current distribution
- Kirchhoff's voltage law (KVL): principles and applications
- Kirchhoff's current law (KCL): principles and applications

Open and Short Circuits

- Definition and impact of open circuits in electrical networks
- Definition and impact of short circuits in electrical networks
- Practical examples and problem-solving

Source Grouping and Conversion

- Grouping of electrical sources: series and parallel combinations
- Conversion of sources: from voltage to current sources and vice versa
- Dependent sources: types and applications

Circuit Analysis Methods

- Branch current method: principles and applications
- Mesh analysis: formulation and solution of mesh equations
- Nodal analysis: formulation and solution of nodal equations
- Superposition theorem: principles and problem-solving

Theorems for Circuit Analysis

- Thevenin's theorem: understanding and practical applications
- Norton's theorem: understanding and practical applications

Power Transfer and Transformations

- Maximum power transfer theorem: principles and applications
- Y- Δ (Delta) transformation: techniques and problem-solving
- Δ -Y (Delta to Wye) transformation: techniques and problem-solving

Software Tools for Circuit Simulation

	● Introduction to circuit simulation software (e.g., SPICE, Multisim, or equivalent) ● Basic functions and features of simulation tools ● Practical exercises in circuit simulation and design
Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1. Lectures: The module may include traditional lectures where the instructor presents the theoretical concepts, principles, and mathematical techniques related to mathematical modeling and electrical circuits. The lectures can provide a foundation for understanding the subject matter. 2. Interactive Discussions: Interactive discussions can be incorporated to encourage student participation and engagement. This can involve questioning and problem-solving activities related to mathematical modeling and electrical circuits. Discussions can help clarify concepts and stimulate critical thinking. 3. LAB Experiment. Sessions: Hands-on LAB.sessions can allow students to apply the theoretical knowledge to real-world scenarios. Students may work with electrical circuit components, measurement devices, and software tools for circuit simulation and analysis. LAB Experiment provide valuable experiential learning opportunities. 4. Computer-based Learning: Computer-based learning resources, such as online tutorials, interactive simulations, and educational software, can be used to supplement the learning process. These resources can assist students in visualizing electrical circuits, simulating their behavior, and exploring mathematical modeling concepts. 6. Group Projects: Collaborative group projects can encourage teamwork and the application of mathematical modeling principles to solve complex electrical circuit problems. Students can work together to design and analyze circuits, formulate mathematical models, and present their findings to the class. 7. Assessment Methods: Various assessment methods can be employed, including quizzes, tests, assignments, and project reports. These assessments can evaluate students' understanding of mathematical modeling and electrical circuits, their ability to apply the learned concepts, and their problem-solving skills. 8. Self-directed Learning: Encouraging students to engage in self-directed learning by exploring additional resources, conducting research, and practicing problems independently can further enhance their understanding and mastery of the subject matter.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem)	79	Structured SWL (h/w)	5.267
Unstructured SWL (h/sem)	46	Unstructured SWL (h/w)	3.067
Total SWL (h/sem)	125		

Module Evaluation					
تقييم المادة الدراسية					
		Time/ Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	3	10% (10)	3,7,11	LO #1-5
	Assignments	2	5% (5)	8,14	LO #1-8
	Lab.	7	20%(20)	1-15	LO #3, 4, 5, 6 ,7 and 8
Summative assessment	Projects	1	5% (5)	12	LO #3,4 ,5,6 and 8
	Mid Exam	1	10% (10)	15	LO # 1-4
	Final Exam	4 hr	50% (50)	16	LO #1-7
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Electric current, voltage difference, resistance and resistivity, conductance and conductivity
Week 2	Ohm's law, linear and non-linear resistance
Week 3	Temperature effect and coefficients of resistance, types of resistors, color coding of resistors
Week 4	Series and parallel circuits
Week 5	Kirchhoff's laws
Week 6	Effect of open and short circuits
Week 7	Grouping sources, conversion of sources, dependent sources
Week 8	Branch current method
Week 9	Mesh analysis
Week 10	nodal analysis
Week 11	Superposition
Week 12	Thevenin and Norton's theorems
Week 13	Maximum power transfer
Week 14	Y-D and D-Y transformation
Week 15	Introduction to software tools for circuit simulation and design
Week 16	Review and revision and Final examination preparation

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	Introduction to Lab Equipment and Basic Measurements
Week 2	EXP 1: Ohm's Law and Basic Components
Week 3	cont.
Week 4	EXP 2:KVL
Week 5	EXP 3: KCL
Week 7	EXP 4: superposition
Week 8	EXP 5: Thevenin's and Norton's Theorems
Week 9	cont.
Week 10	EXP 6: Maximum power transfer
Week 11	cont.
Week 12	EXP 7: Circuit Simulation Tools
Week 13	cont.
Week 14	Final Project and Review
Week 15	Final Exam

Learning and Teaching Resources		
	Text	Available in the Library ?
Required Texts	1-Fundamentals of Modern Electric Circuit Analysis and Filter Synthesis A Transfer Function Approach Second Edition© The Editor(s) (if applicable) and The Author(s), under exclusive license to Springer Nature Switzerland AG 2023 2-Fundamentals of Electric Circuits Charles K. Alexander Professor Emeritus of Electrical Engineering and Computer Science Cleveland State University ,Matthew N. O. Sadiku Department of Electrical and Computer Engineering Prairie View A&M University Published by McGraw-Hill Education, 2 Penn Plaza, New York, NY 10121. Copyright © 2021 by McGraw-Hill Education. 3."Engineering Circuit Analysis" by William H. Hayt Jr. and Jack E. Kemmerly: This textbook provides a comprehensive introduction to electrical circuits, covering topics such as circuit analysis techniques, network theorems, and AC circuit analysis. 5."Introduction to Electric Circuits" by Richard C. Dorf and James A.	Yes Soft copy

	Svoboda: This textbook offers a practical approach to understanding electric circuits. It covers topics such as circuit analysis techniques, network theorems, AC circuit analysis, and introduces mathematical modeling principles. 4."Mathematical Modeling and Simulation: Introduction for Scientists and Engineers" by Kai Velten: This textbook focuses specifically on mathematical modeling techniques and their application in various scientific and engineering fields. It covers topics such as modeling principles, differential equations, simulation methods, and includes examples relevant to electrical circuits.	
Recommended Texts	1."Electric Circuits" by James W. Nilsson and Susan A. Riedel: This textbook offers a clear and concise introduction to electrical circuits and circuit analysis. It covers topics such as Kirchhoff's laws, network theorems, AC circuit analysis, and introduces mathematical modeling techniques. 2."Mathematical Modeling and Simulation: Introduction for Scientists and Engineers" by Kai Velten: This textbook focuses specifically on mathematical modeling techniques and their application in various scientific and engineering fields. It covers topics such as modeling principles, differential equations, simulation methods, and includes examples relevant to electrical circuits. 3.Basic Engineering Circuit Analysis J. DAVID IRWIN Auburn University R. MARK NELMS Auburn University 2021 12th Edition 4-Fundamentals of Modern Electric Circuit Analysis and Filter Synthesis A Transfer Function Approach Second Edition© The Editor(s) (if applicable) and The Author(s), under exclusive license to Springer Nature Switzerland AG 2023 5-Fundamentals of Electric Circuits Charles K. Alexander Professor Emeritus of Electrical Engineering and Computer Science Cleveland State University ,Matthew N. O. Sadiku Department of Electrical and Computer Engineering Prairie View A&M University Published by McGraw-Hill Education, 2 Penn Plaza, New York, NY 10121. Copyright © 2021 by McGraw-Hill Education.	Yes pdf
Websites	1.MATLAB(www.mathworks.com/products/matlab.html) 2. Simulink (www.mathworks.com/products/simulink.html) 3. CircuitLab (www.circuitlab.com) 4. Multisim Live (www.multisim.com/live/)	

Module Information					
Module Title	Computer Programming		Module Delivery		
Module Type	CORE		Class lecture + Lab		
Module Code	AIE102				
ECTS Credits	5				
SWL (hr/sem)	125				
Module Level		1	Semester of Delivery		2
Administering Department		Artificial Intelligence Engineering	College	Engineering	
Module Leader			e-mail		
Module Leader's Acad. Title		Lecturer	Module Leader's Qualification		Ph.D
Module Tutor			e-mail		
Peer Reviewer Name		م.د. قصي شهاب حمد	e-mail	qusay.shihab@alfarabiuc.edu.iq	
Review Committee Approval			Version Number		1.0

Relation With Other Modules			
Prerequisite module	COE103	Semester	1.1
Co-requisites module	None	Semester	
Module Aims, Learning Outcomes and Indicative Contents			
Module Aims	- Learning how to use functions in programming. - Learning how to use Modules to solve real-life and scientific problems. - Gaining knowledge of essential OOP concepts like: class, inheritance, and data encapsulation.		
Module Learning Outcomes	By the end of this module, students will be able to: Understand and Use Standard Data Structures - Learn to use Tuples, Sets, and Dictionaries Process Text Files - Read from and write to a text file Understand and Use Functions - Describe why functions are used. - Use functions to solve problems. - Learn passing argument to functions, returning values from		

	functions, and using recursive functions. 4. Understand and Use Modules ○ Understand what a module is. ○ Learn how to use modules or parts of modules. 5. Use Modules in Various Applications ○ Learn using widely used modules like: os, pandas, selenium, BeautifulSoup, JSON, and Matplotlib in various applications. 6. Get Essential Knowledge About OOP ○ Get knowledge of essential OOP concepts like: class, inheritance, and data encapsulation
Indicative Contents	• Standard Data Structures • Files • Functions and Recursive Functions • Modules • Classes
Learning and Teaching Strategies	
Strategies	9) Lectures. 10) Homework and Assignments. 11) Tests and Exams. 12) In-Class Questions and Discussions. 13) In- and Out-Class oral conversations.

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem)	79	Structured SWL (h/w)	5.3
Unstructured SWL (h/sem)	46	Unstructured SWL (h/w)	3.1
Total SWL (h/sem)	125		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Review to Python Programming
Week 2	Python standard data structures: Tuples, Sets, and Dictionaries
Week 3	Python text files: reading from and writing to a file
Week 4	Python function creation, return values and calls
Week 5	Function arbitrary arguments, passing lists to a function, and recursive functions

Week 6	Python module: os
Week 7	Python module: pandas
Week 8	Python module: selenium
Week 9	Python module: BeautifulSoup
Week 10	Python module: JSON
Week 11	Python module: Matplotlib
Week 12	Applications of Python Modules: Excel manipulation
Week 13	Applications of Python Modules: using API's
Week 14	Applications of Python Modules: web scraping
Week 15	Python classes and OOP: classes, objects, attributes, and methods.
Week 16	Final Exam

Delivery Plan (Weekly Lab. Syllabus)	
	Material Covered
Week 1	Review to Python Programming
Week 2	Python standard data structures: Tuples, Sets, and Dictionaries
Week 3	Python text files: reading from and writing to a file
Week 4	Python function creation, return values and calls
Week 5	Function arbitrary arguments, passing lists to a function, and recursive functions
Week 6	Python module: os
Week 7	Python module: pandas
Week 8	Python module: selenium
Week 9	Python module: BeautifulSoup
Week 10	Python module: JSON
Week 11	Python module: Matplotlib
Week 12	Applications of Python Modules: Excel manipulation

Week 13	Applications of Python Modules: using API's
Week 14	Applications of Python Modules: web scraping
Week 15	Python classes and OOP: classes, objects, attributes, and methods.
Week 16	Final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts		
Recommended Texts	• Brian Heinold, A Practical Introduction to Python Programming, 2012 • Ben Stephenson, The Python Workbook: A Brief Introduction with Exercises and Solutions, 2014	No
Websites	https://www.w3schools.com/python/	

Module Information			
Module Title	Mathematics 2		Module Delivery
Module Type	Support		☒ Theory ☐ Lecture ☐ Lab ☐ Tutorial ☐ Practical ☐ Seminar
Module Code	E102		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	1	Semester of Delivery	
Administering Department	Artificial Intelligence Engineering	College	College of Engineering
Module Leader		e-mail	
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name	م.م هند سعد جواد	e-mail	Hind.saad@alfarabiuc.edu.iq
Scientific Committee Approval Date		Version Number	1.0

Module Aims, Learning Outcomes and Indicative Contents	
Module Objectives	General Objectives of Teaching Mathematics The overall objective of education is to prepare individuals for personal and professional life, enabling them to contribute effectively to society and achieve personal development. The general objectives of teaching Mathematics are to: - Enhance students' proficiency in Mathematics in particular and improve their overall academic performance. - Develop students' abilities in deduction, generalization, and logical reasoning.

	• Enable students to understand fundamental mathematical concepts, including relations, functions, trigonometric functions, differentiation, integration, and probability. • Develop students' understanding of mathematical proofs and their underlying logical foundations. • Familiarize students with fundamental mathematical structures, such as groups and matrices. • Develop students' appreciation of Mathematics and their awareness of its important applications in everyday life. • Demonstrate the practical applications of mathematical concepts and engineering principles, emphasizing the importance of Mathematics as a fundamental component of engineering education.
Module Learning Outcomes	Knowledge and Understanding 1. The course content has been restructured and organized in a more logical sequence in accordance with the curriculum, with the aim of providing clear, relevant, and engaging Calculus content for future engineers and scientists. 2. The course introduces the fundamental transcendental functions and integrates these functions throughout the subsequent chapters through relevant examples and exercises to reinforce students' understanding and practical application. 3. Enable students to develop a strong understanding of the mathematical language and terminology required to apply Calculus concepts to a wide range of applications in science and engineering.
Indicative Contents	

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

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Integrals: Area and Estimating with Finite Sums, Sigma Notation and Limits of Finite Sums

Week 2	The Definite Integral, The Fundamental Theorem of Calculus
Week 3	Indefinite Integrals and the Substitution Method
Week 4	Definite Integral Substitutions and the Area Between Curves
Week 5	Applications of Definite Integrals: Volumes Using Cross-Sections and Cylindrical Shells
Week 6	Arc Length, Areas of Surfaces of Revolution
Week 7	The Logarithm Defined as an Integral, Hyperbolic Functions
Week 8	Techniques of Integration: Using Basic Integration Formulas
Week 9	Integration by Parts, Trigonometric Integrals, Trigonometric Substitutions
Week 10	Integration of Rational Functions by Partial Fractions, Integral Tables and Computer Algebra Systems
Week 11	Improper Integrals
Week 12	First-Order Differential Equations: separable and homogeneous
Week 13	First-Order Differential Equations: linear and exact
Week 14	Infinite Sequences and Series
Week 15	Parametric Equations and Polar Coordinates
Week 16	Preparatory week before the final Exam

Learning and Teaching Resources		
	Text	Available in the Library?
Required Texts	Weir, M., Hass and Giordano. (2008). Thomas' Calculus. Eleventh Edition, Pearson-Addison-Weesley.	Y
Recommended Texts	Howard, A. et. Al. (2008). Calculus. McGraw-Hill	Y
Websites		

Module Information			
معلومات المادة الدراسية			
Module Title	Fundamentals of Artificial Intelligence Algorithms		Module Delivery
Module Type	Core		☒ Theory ☒ Lecture ☐ Lab ☒ Tutorial ☐ Practical ☐ Seminar
Module Code	AIE 106		
ECTS Credits	6		
SWL (hr/sem)	150		
Module Level	1	Semester of Delivery	1
Administering Department	Al. Eng.	College	College of Engineering
Module Leader	م.م صبا عبدالمنعم علي	e-mail	
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor	Name (if available)	e-mail	E-mail
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date	10/11/2025	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 Objectives أهداف المادة الدراسية	The main aims and objectives are: 1. To appreciate and understand the principles of AI and the ethical issues concern with it. 2. To have basic proficiency in a traditional AI language, including writing 3. simply to intermediate programs and understanding code are written in that 4. language. 5. To understand the fundamental issues of knowledge representation and blind and heuristic search. 6. To have a basic understanding of some of the more advanced topics of AI such as fuzzy systems, natural language processing, agents and robotics.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	At the end of this course the student will be able to: • Understanding the fundamentals of AI • Understanding the problem and problem solving techniques using searching • learning about machine learning, its types, and algorithms • Distinguish between the searching techniques • Knowledge representation • Planning methods and techniques • Understanding the fundamental conceptacles of Fuzzy systems • Natural language processing, Artificial vision, and Robotics • Understanding the Societal and ethical concerns with AI
Indicative Contents المحتويات الإرشادية	Daily exams with practical and scientific questions. * Participation marks for difficult competition questions among students. * Setting grades for homework assignments and reports assigned to them. Quarterly exams for the curriculum, in addition to the mid-year exam and final exam.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1. Introducing the students to practical exams, team works, prepare students for Higher education. 2. Teach students how to be creative and to work in teams for innovations. 3. Prepare students to be ready to be involved in national and international

Student Workload (SWL)			
الحمل الدراسي للطلاب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	78	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعيا	5.2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	72	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعيا	4.8
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	150		

Module Evaluation					
تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (5)	7 and 14	LO #2 and #5
	Assignments	2	10% (5)	11 and 13	LO #4 and #5
	Projects / Lab.	1	10% (10)	Continuous	All
	Participation & Attendance	1	10% (10)	Continuous	All
Summative assessment	Midterm Exam	2 hr	10% (10)	9	LO #1 - #3
	Final Exam	3 hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)	
المنهاج الاسبوعي النظري	
	Material Covered

Engineering

Week 1	Introduction to Artificial Intelligence, foundations of AI, the historical evolution of AI, and AI classification
Week 2	Intelligent Agents; types of agents, intelligent agents, and agent environment
Week 3	Problem-solving using search algorithms
Week 4	Problem-solving using Uninformed (Blind) search including; Breadth-first Search and Depth-first Search
Week 5	Problem-solving using Uninformed (Blind) search including; Depth-limited Search
Week 6	Quiz1
Week 7	Problem-solving using Informed search (Heuristic search) using; Best first search, A* search, and Greedy search
Week 8	Problem-solving using Informed search (Heuristic search) using; Graph Search
Week 9	Machine Learning: Supervised machine learning including; Decision tree and KNN
Week 10	Unsupervised machine learning, including; K-means clustering
Week 11	Classification clustering
Week 12	Regression and decomposition
Week 13	Advanced AI; Fuzzy systems, Natural language processing, Artificial vision, and Robotics
Week 14	Quiz2
Week 15	Mid Exam
Week 16	AI and Societal/ethical concerns

Learning and Teaching Resources		
مصادر التعلم والتدريس		
	Text	Available in the Library?
Required Texts		
Recommended Texts	Nils J. Nilsson (2008), "Artificial Intelligence: A new Synthesis", Morgan Kaufmann Inc. • Stuart Russell and Peter Norvig, (2002), "Artificial Intelligence: A Modern Approach", Prentice Hall. • George F. Luger, (2002), "Artificial Intelligence:	

	Structures and Strategies for Complex Problem Solving", Chapter, AddisonWesley, • Thomas Dean, (1994), "Artificial Intelligence: Theory and Practice", Addison-Wesley, • S. Rajasekaran and G.A. Vijayalaksmi Pai, (2005), "Neural Network, Fuzzy Logic, and Genetic Algorithms - Synthesis and Applications", Prentice Hall.	
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 Information			
معلومات المادة الدراسية			
ModuleTitle	Computer Skills		Module Delivery
ModuleType	Basic		☒ Theory ☐ Lecture ☒ Lab ☐ Tutorial ☐ Practical ☐ Seminar
ModuleCode	AIE109		
ECTS Credits	4		
SWL(hr/sem)	100		
Module Level	1	Semester of Delivery	
Administering Department	Al. Eng.	College	College of Engineering
Module Leader	م.م سناء غني قدوري	e-mail	Sina.quduri@alfarabiuc.edu.iq
Module Leader's Acad. Title		Module Leader's Qualification	
Module Tutor		e-mail	
Peer Reviewer Name		e-mail	
Scientific Committee Approval Date		Version Number	

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 Objectives أهداف المادة الدراسية	1. Training students on the basics of using the computer and providing them with the necessary skills to deal with the computer with high efficiency. 2. Assisting the student in distinguishing and developing his\ her scientific and artistic abilities. 3. Enriching the student's skills to be able to deal with the computer with high efficiency. 4. Providing students with away to use other modern technologies related to the educational process.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Enabling the student to know the concepts of information technology by learning the basics of the computer. 2. Enabling the student to know about the use of GUI operating systems. 3. Enabling the student to deal with the skills of using the operating system (Windows operating system) through exploring, customizing, and controlling its settings. 4. Enabling the student to work on the word processing program (MicrosoftWord). 5. Enabling the student to work on the spreadsheet program (Micros of tExcel). 6. Enabling the student to work on the presentation program (Microsoft PowerPoint).
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. • Course introduction(4hrs) • Working with GUI operating systems with a focus on Microsoft Windows OS • Microsoft Office Word(MSWord) • Microsoft Office Excel(MS Excel) • Microsoft Office PowerPoint(MS PowerPoint)
Description	Overview of computers: basic components, applications. GUI operating systems: Microsoft Windows operating system. Microsoft Office Word: getting started with Word, editing a document and formatting text and paragraphs, adding tables and inserting graphic objects, controlling page appearance and proofing a document. Microsoft Office Excel: getting started with Excel, sorting, selecting and subtotaling data, formulas and functions, worksheet formatting and presentation. Microsoft Office PowerPoint: getting started with PowerPoint, developing a PowerPoint presentation, adding graphical elements to your presentation and modifying objects in your presentation, adding graphical elements, tables and charts to your presentation and modifying objects in your presentation, prepare to deliver your presentation.

Learning and Teaching Strategies استراتيجيات التعلم و التعليم	
Strategies	In this course, students are guided by: - Using different examples. - Using different styles of discussion that aim to connect the theoretical and practical sides. - Asking questions and giving exercises that require analysis and conclusions related to lectures. - Encourage students to participate in discussions and do the practical work. - Encourage students to work in groups.

Student Workload(SWL) الحمل الدراسي للطلاب محسوبة بال 15 اسبوع			
Structured SWL(h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	64	Structured SWL(h/w) الحمل الدراسي المنتظم للطلاب اسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي اللا منتظم للطلاب خلال الفصل	36	Unstructured SWL(h/w) الحمل الدراسي اللا منتظم للطلاب خلال الفصل اسبوعيا	2.4
Total SWL (h/sem) الحمل الدراسي الكلي للطلاب خلال الفصل	100		

Module Evaluation تقديم المادة الدراسية					
		Time/Number	Weight(Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10%(10)	6 and 12	
	Assignments	2	10%(10)	2 and 13	
	Projects/ Lab.	1	10%(10)	Continuous	All
	Report	1	10%(10)	13	
Summative assessment	Midterm Exam	2hr	10%(10)	9	
	Final Exam	3hr	50%(50)	16	All
Total assessment			100%(100Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الأسبوعي النظري	
	Material Covered
Week1	Overview of computers and their basic components and applications
Week2	Introduction to windows operations system
Week3	Operation System properties, Difference between OS,program ,software , application
Week4	Network and internet (setting ,www, Email, search Engine)
Week5	Microsoft Office Word: Editing a Document and Formatting Text and Paragraphs
Week6	Microsoft Office Word: Adding Tables and Inserting Graphic Objects
Week7	Microsoft Office Word: Controlling Page Appearance and Proofing a Document
Week8	Microsoft Office Excel: Getting Started with Excel
Week9	Microsoft Office Excel: Sorting, Selecting and Sub totaling data
Week 10	Microsoft Office Excel: Formulas and Functions
Week 11	Microsoft Office Excel: Worksheet Formatting and Presentation
Week 12	Microsoft Office Power Point: Getting Started with Power Point
Week 13	Microsoft Office Power Point: Developing a PowerPoint Presentation, Adding Graphical Elements to Your Presentation and Modifying Objects in Your Presentation
Week 14	Microsoft Office Power Point: Adding Graphical Elements, tables and charts to Your Presentation and Modifying Objects in Your Presentation
Week 15	Microsoft Office Power Point: Prepare to deliver your presentation
Week 16	Preparatory week before the final exam

Delivery Plan (Weekly-Lab Syllabus)	
المناهج الأسبوعي للمختبر	
	Material Covered
Week1	Overview of computers and their basic components and applications
Week2	Introduction to windows operations system
Week3	Operation System properties, Difference between OS,program ,software , application
Week4	Network and internet (setting ,www, Email, search Engine)
Week5	Microsoft Office Word: Editing a Document and Formatting Text and Paragraphs
Week6	Microsoft Office Word: Adding Tables and Inserting Graphic Objects
Week7	Microsoft Office Word: Controlling Page Appearance and Proofing a Document
Week8	Microsoft Office Excel: Getting Started with Excel
Week9	Microsoft Office Excel: Sorting, Selecting and Sub totaling data
Week 10	Microsoft Office Excel: Formulas and Functions
Week 11	Microsoft Office Excel: Worksheet Formatting and Presentation
Week 12	Microsoft Office Power Point: Getting Started with Power Point
Week 13	Microsoft Office Power Point: Developing a PowerPoint Presentation, Adding Graphical Elements to Your Presentation and Modifying Objects in Your Presentation
Week 14	Microsoft Office Power Point: Adding Graphical Elements, tables and charts to Your Presentation and Modifying Objects in Your Presentation
Week 15	Microsoft Office Power Point: Prepare to deliver your presentation
Week 16	Preparatory week before the final exam

Learning and Teaching Resources		
مصادر التعلم للتدريس		
	Text	Available in the Library?

Required Texts	- Joan Lambert and Steve Lambert, Windows 10 step by step, 1st Edition 2015. - Joan Lambert and Curtis Frye, Microsoft Office 2016 step by step, 1st Edition 2015.	Yes
Recommended Texts	- Michael Miller, ABSOLUTE BEGINNER'S GUIDE TO COMPUTER BASICS, 5th EDITION, QUE Indianapolis, Indiana 46240, 2010. - Paul McFedries, TEACH YOURSELF VISUALLY MICROSOFT WINDOWS 10, ANNIVERSARY	No
Websites	Microsoft Help, https://support.microsoft.com/en-us/products/LearnMicrosoftOffice , https://www.goskills.com/Microsoft-Office	

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