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

Academic Program and Course Description Guide

2024

Introduction:

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

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

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

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

Concepts and terminology:

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

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

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

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

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

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

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

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

Academic Program Description Form

University Name: .....Al-KUT University Collage .....

Faculty/Institute: .....Engineering

Scientific Department: ..... Electrical Engineering Techniques .....

Academic or Professional Program Name: ..... Electrical Engineering Techniques .....

Final Certificate Name: ..... Technical engineering.....

Academic System: .....semesters .....

Description Preparation Date: 1-11-2023

File Completion Date: 1-6-2024

Signature:

Head of Department Name: Assist. Prof .Dr. Fawzi Mohammed

Date: 2/6/2024

Signature:

Scientific Associate Name: assist. Dr. Abid ul-Zahraa Hamidi

Date: 2/6/2024

The file is checked by: Assist. Dr. Ali sa'ad

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Date: 2/6/2024

Signature:

2/6/2024

Approval of the Dean

1. Program Vision

Leadership in electrical engineering and technical innovation

2. Program Mission

At Al Kut University College, we are committed to providing our students with high-quality education in the field of electrical engineering techniques, integrating theoretical knowledge with practical applications and scientific research, to prepare innovative engineers capable of keeping pace with global technological challenges and contributing to the development of the industry.

3. Program Objectives

• Providing courses covering the basics of electrical engineering and advanced technologies to enable students to understand and apply electrical principles
• Encouraging scientific research and innovation in electrical engineering technologies to meet industrial and societal challenges
• Providing practical training opportunities for students in industrial institutions and companies to enhance their practical and technical skills
• Enhancing cooperation with industrial and academic sectors to exchange knowledge and support professional development opportunities for students
• Motivating students to think critically and creatively and develop innovative solutions to engineering problems

4. Program Accreditation

Does the program have program accreditation? And from which agency?

No

5. Other external influences

Is there a sponsor for the program?

No

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	–	–	–	–
College Requirements	–	–	–	–
Department Requirements	48	240		Basic
Summer Training	–	–	–	–
Other				

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

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours	
			theoretical	Practical
2023-2024 The first stage/first semester	EET1101	DC circuits	4	2
	EET1102	Digital technologies	4	2
	EET103	Arabic Language	2	/
	EET1104	Deffrintial mathmatics	6	/
	EET1105	Engineering workshop	2	2
	EET1106	Human Rights and Democracy	2	/
2023-2024 First stage/second semester	EET1201	Engineering mechanics	4	/
	EET1202	English language	2	/
	EET1203	Engineering Drawing	4	/
	EET1204	AC circuits	4	2
	EET1205	Integral Mathematics	6	/
	EET1206	computer principles	3	/

8. Expected learning outcomes of the program

Knowledge	
1- Knowing and understanding electrical circuits and how to connect them 2- Know and understand the types of electric motors and how to connect them 3- Knowledge and understanding of the mechanical and electrical parts of generating stations and how they work 4- Knowledge and understanding of the electronic circuits of various precision devices and how to design them 5- Knowledge and understanding of different programming languages and how to use and benefit from them 6- Knowing the types of digital controllers and how to program them and design their circuits	
Skills	
1- Connecting and operating electrical and electronic circuits and electric motors 2- Design and implementation of electrical power systems and protection systems in electrical power systems 3- Diagnosing and treating faults occurring in electrical power systems	Learning Outcomes Statement 2
Learning Outcomes 3	Learning Outcomes Statement 3
Ethics	
1- Working as a team	2- Commitment to the ethics of the scientific institution
3- That the student recognizes the importance of the academic subjects	4- Receiving information and cognitive receptivity

9. Teaching and Learning Strategies

1- Classroom learning through theoretical and practical lectures
2- Conducting practical tests in laboratories
3- Use the method of thinking, discussing, and presenting information

10. Evaluation methods

1- Exam grades
2- Evaluation of reports
3- Graduation research
4- Evaluation of summer training in scientific institutions

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Prof. Dr. Fawzi Muhammad Mounir Ahmed	Electrical engineering				/	
Prof. Dr. Abdel Azim Abdel Karim Ali Musa	Electrical engineering	Computers and control			/	
Prof. Dr. Muhammad Zaki Hussein Al-Fayez	Electrical engineering				/	
M.D. Thamer Fahd Ahmed Mahmoud	Optical communications engineering				/	
Dr. Safaa Saud Mahdi	Digital systems				/	
M.D. Reda Ahmed Sadiq	Electrical engineering	Electronics			/	
Assist. Lect. Youssef Ibrahim Taha	Electrical engineering				/	
Assist. Lect. Hussein Fathi Hammadi Al-Jubouri	Electrical engineering				/	

Assist. Dr. Ali Dhahi Gharir	Mechanical Engineering	Energy conversion				/
Assist. Lect. Karar Haider Shaker	Computer Engineering	information technology			/	
Assist. Lect. Muhammad Hilal Madboub	Electrical engineering				/	
Assist. Lect. Asmaa ali jaish	Electrical engineering				/	
Assist. Lect. Ahmed Qusay Jawad	Computer Engineering	Information technology and information systems management			/	
Assist. Lect. Sarah Taher Yahya	Mechanical Engineering				/	

Professional Development
Mentoring new faculty members
Directing new faculty members to the necessity of working on developing the scientific curriculum, methods of delivering scientific lectures, and how to deliver the scientific material to the student.
Professional development of faculty members
Working to find development ideas and working to develop scientific laboratories and the practical aspect, since the students' specialization is a scientific specialization

12. Acceptance Criterion

Students who graduate from the preparatory school in the scientific branch are allowed admission to the College of Electrical Engineering Technology after passing the study and succeeding in it and obtaining an admission rate of 60% or more. The department accepts graduates of the scientific branch from the preparatory school in the biological and scientific branches in the applied branch and the professional branches with a rate of (65%).

13. The most important sources of information about the program

1- Textbooks prescribed by the Ministry of Higher Education and Scientific Research
2- External scientific sources
3- Using libraries and the Internet

14. Program Development Plan

The department seeks to present many methodological and research plans in order to develop the department and the scientific environment, as the department presidency, the department council, and the scientific committee work to provide all requirements in order to develop the department.

Program Skills Outline														
				Required program Learning outcomes										
Year/Level	Course Code	Course Name	Basic or optional	Knowledge				Skills				Ethics			
				A1	A2	A3	A4	B1	B2	B3	B4	C1	C2	C3	C4
2023-2024 The first stage – 1st semester	ETT1101	Dccircuits	Basic	/	/	/	/	/	/	/	/	/	/	/	
	ETT1102	Digital technologies	Basic	/	/	/	/	/	/	/	/	/	/	/	
	ETT1103	Arabic lnguage	Basic	/	/	/	/	/	/	/	/	/	/	/	
	ETT1104	Differential Mathematics	Basic	/	/	/	/	/	/	/	/	/	/	/	
	ETT1105	Engineering workshop	Basic	/	/	/	/	/	/	/	/	/	/	/	
	ETT1106	Human Rights and Democracy	Basic	/	/	/	/	/	/	/	/	/	/	/	
2023-2024 The first stage - the 2nd	ETT1201	Engineering mechanics	Basic	/	/	/	/	/	/	/	/	/	/	/	
	ETT1202	English language	Basic	/	/	/	/	/	/	/	/	/	/	/	

semester	**ETT1203**	**Engineering Drawing**	**Basic**	/	/	/	/	/	/	/	/	/	/	/	
	ETT1204	**AC circuits**	**Basic**	/	/	/	/	/	/	/	/	/	/	/	
	ETT1205	**Itegral mathematics**	**Basic**	/	/	/	/	/	/	/	/	/	/	/	
	ETT1206	**Computr principlels**	**Basic**	/	/	/	/	/	/	/	/	/	/	/	

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

Course Description Form(1)

• Course Name:
DC Circuits
• Course Code:
ETT1101
• Semester / Year:
2023−2024 / 1st semester
• Description Preparation Date:
2023−3−6
• Available Attendance Forms:
• Number of Credit Hours (Total) / Number of Units (Total)
200 hours / 8 units
• Course administrator's name (mention all, if more than one name)
Name: Asmaa ali jaish Email: /
• Course Objectives

Course Objectives	1. To develop a thorough understanding of the scientific principles that govern DC electrical circuits, including voltage, current, resistance, and power relationships. 2. To apply scientific laws, such as Ohm's law and Kirchhoff's laws, to accurately analyze and solve electrical circuits. 3. To explore the scientific properties and behavior of circuit components, including resistors and understand their impact on circuit performance. 4. To enhance problem-solving skills by scientifically analyzing complex circuit configurations and proposing appropriate solutions. 5. To investigate the scientific principles underlying circuit design and evaluation, including the selection of components based on scientific criteria and the assessment of circuit performance using scientific measurements. 6. To study the scientific aspects of transient and steady-state behavior in circuits, including the analysis of DC and AC circuits, and interpret scientific data represented by voltage and current waveforms. 7. To utilize scientific simulation tools and modeling techniques for scientific exploration, experimentation, and validation of circuit behavior. 8. To emphasize the importance of adhering to scientific safety protocols when working with electrical circuits, ensuring compliance with scientific guidelines and standards. 9. To establish connections between scientific principles and practical scenarios, highlighting the scientific relevance of electrical circuits in real world scientific applications and technological advancements. 10. To foster scientific critical thinking skills in evaluating circuit configurations, proposing scientifically-based design improvements, and scientifically assessing limitations and potential risks associated with circuit operation.

• Teaching and Learning Strategies

Strategy	Two main strategies 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. 1. Theory-Based Lectures: Traditional classroom lectures are used to present theoretical concepts, principles, and theories related to electrical engineering. Professors or instructors explain complex ideas, provide examples, and engage students in discussions to foster understanding. 2. Laboratory Experiments: Laboratory sessions are an integral part of electrical engineering education. Students engage in hands-on experiments, using equipment, instruments, and software tools to apply theoretical knowledge, analyze data, and gain practical skills. This helps them understand the practical aspects of electrical engineering and reinforces theoretical concepts.

• Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	6	• Introduction to DC circuits and circuit elements. • Voltage, current, and resistance (Ohm's Law).		Through daily lectures	Through student discussion and daily tests
Week 2	6	• Kirchhoff's Laws. • Series and parallel circuits. • Circuit analysis techniques: Node voltage method.			
Week 3	6	• Circuit analysis techniques: Mesh current method. • Superposition theorem.			
Week 4	6	• Thevenin's theorem. • Norton's theorem.			
Week 5	6	• Maximum power transfer theorem. • Capacitors in DC circuits: Charging and discharging.			
Week 6	6	• Inductors in DC circuits: Transients and time constants. • RL circuits.			

Week 7	6	• Transients in RC circuits • Capacitive and inductive reactance			
Week 8	6	• Transients in RL circuits • Natural response and forced response			
Week 9	6	• Transients in LC circuits • Resonance in series and parallel circuits			
Week 10	6	• Mesh analysis with dependent sources			
Week 11	6	• Network theorems: Millman's theorem, reciprocity theorem			
Week 12	6	• Introduction to three-phase circuits			
Week 13	6	• Delta-star transformation			
Week 14	6	• Three-phase circuits: Delta and star connections			
Week 15	6	• Review and revision			
Week 16	6	Preparatory week before the final Exam			

• Course Evaluation

1- Quizzes (2)(10%)
2- Assignments (3)(10%)
3- Lab (1)(10%)
4- Report (14)(10%)
5- Mid exam (10%)
6- Final exam (50%)

• Learning and Teaching Resources

Required textbooks (curricular books, if any)	Fundamentals of Electric Circuits, C.K. Alexander and M.N.O Sadiku, McGraw-Hill Education
Main references (sources)	DC Electrical Circuit Analysis: A Practical Approach Copyright Year: 2020, dissidents.
Electronic References, Websites	https://www.coursera.org/browse/physical-science-and engineering/electrical-engineering

Course Description Form(2)

• Course Name:
Digital technologies
• Course Code:
ETT1102
• Semester / Year:
2023−2024 / 1st semester
• Description Preparation Date:
2023−3−6
• Available Attendance Forms:
In class
• Number of Credit Hours (Total) / Number of Units (Total)
150 hours / 6 units
• Course administrator's name (mention all, if more than one name)
Name: mohamemed hilal mathbob Email: /

• Course Objectives	
Course Objectives	1. To develop a solid understanding of fundamental digital principles: The aim is to grasp the basic concepts of digital logic, number systems, Boolean algebra, and logic gates, providing a strong foundation for further studies in digital circuits and systems. 2. To acquire practical skills in circuit design and implementation: The aim is to develop practical skills in designing, implementing, and testing digital circuits using laboratory equipment, integrated circuits, and various logic gates. 3. To enhance problem-solving and analytical thinking abilities: The aim is to cultivate problem-solving skills by analyzing and simplifying complex digital circuits using Boolean algebra, truth tables, and logic simplification techniques. 4. To foster teamwork and collaboration: The aim is to encourage collaboration through group projects, lab exercises, and discussions, fostering teamwork skills and the ability to work effectively in a digital design environment. 5. To promote critical thinking and application of knowledge: The aim is to encourage critical thinking by applying theoretical knowledge to real world scenarios, such as designing circuits to perform specific functions or solving digital logic problems using different logic gates and techniques.

• Teaching and Learning Strategies	
Strategy	Two main strategies 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. • Theory-Based Lectures: Traditional classroom lectures are used to present theoretical concepts, principles, and theories related to electrical engineering. Professors or instructors explain complex ideas, provide examples, and engage students in discussions to foster understanding. • Laboratory Experiments: Laboratory sessions are an integral part of electrical engineering education. Students engage in hands-on experiments, using equipment, instruments, and software tools to apply theoretical knowledge, analyze data, and gain practical skills. This helps them

	understand the practical aspects of electrical engineering and reinforces theoretical concepts.

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	6	• Numerical Systems: Decimal, Binary, Octal, Hexadecimal.		Through daily lectures	Through student discussion and daily tests
Week 2	6	• Conversion between Decimal and Binary. • Conversion between Decimal and Octal.			
Week 3	6	• Conversion between Decimal and Hexadecimal. • Conversion between Octal and Binary.			
Week 4	6	• Conversion between Hexadecimal and Binary. • Binary Arithmetic: Addition and Subtraction.			
Week 5	6	• Binary Arithmetic: Using Complements for Subtraction. • Introduction to Logic Gates: AND, OR, NOT.			
Week 6	6	• Implementing Logic Gates with Switches. • Implementing AND and OR Gates with Diodes and Resistors.			
Week 7	6	• Implementing AND, OR, and NOT Gates with Transistors. • Introduction to XOR and XNOR Gates.			
Week 8	6	• Boolean Algebra: De Morgan's Theorems. • Boolean Algebraic Relationships.			
Week 9	6	• Implementing Different Gates using NAND Gate. • Implementing Different Gates using NOR Gate.			
Week 10	6	• Circuits with Different Gates: Truth Table and Logic Equation. • Simplification of Logic Circuits with Boolean			

		Algebra.			
Week 11	6	• Introduction to Karnaugh Map: 2-variable and 3-variable Maps. • Transferring Truth Table to Karnaugh Map.			
Week 12	6	• Karnaugh Map: 4-variable Map. • Examples of Digital Circuits with Karnaugh Map.			
Week 13	6	• Simplification of Logic Circuits with Karnaugh Map: Don't Care Conditions. • Logic Circuits with the Property of Folding and Interlocking.			
Week 14	6	• Arithmetic Circuits: Half-Adder and Full-Adder. • Arithmetic Circuits: Half-Subtractor and Full-Subtractor.			
Week 15	6	• Review and Revision. • Practice Exam and Preparation for Final Assessment.			
Week 16	6	Preparatory week before the final Exam			

• Course Evaluation

- Quizzes (2)(10%)
- Assignments (2)(10%)
- Lab (1)(10%)
- Report (1)(10%)
- Mid exam (10%)
- Final exam (50%)

• Learning and Teaching Resources

Required textbooks (curricular books, if any)	J. F. Wakerly, "Digital Design: Principles and Practices," 4th ed. Pearson Education, 2005.
Main references (sources)	T. L. Floyd and R. Fletcher, "Digital Fundamentals," 11th ed. Pearson, 2014.
Electronic References, Websites	The Collage E-Library

Course Description Form(3)

• Course Name:
Arabic language
• Course Code:
ETT1103
• Semester / Year:
2023−2024 / 1st semester
• Description Preparation Date:
2023−3−6
• Available Attendance Forms:
In class
• Number of Credit Hours (Total) / Number of Units (Total)
50 hours / 2 units
• Course administrator's name (mention all, if more than one name)
Name: noor al huda kareem Email: /

• Course Objectives	
Course Objectives	The objectives of the course are for the student to be able to: 1-Learn about the types of common linguistic errors and explain their causes and how to avoid them 2- He learns the rules related to the marfu' ta', the long ta', and the open ta' and how to write them correctly 3- He learns the rules of writing the extended and short alifs and using the solar and lunar letters correctly 4- Identifying the dā' and dā' and knowing how to distinguish between them in writing 5- Learn how to write the hamza correctly according to linguistic rules 6- Identify punctuation marks and use them correctly in texts 7- The difference between a noun, a verb, and the distinction while in the table 8- Understanding objects and how to use them correctly in texts 9- Learn numbers and numbers and use them to express quantities 10- Avoid common linguistic mistakes in the context of the process of enhancing and understanding grammar and improving language skills

• Teaching and Learning Strategies	
Strategy	The learning and teaching strategies used in the Arabic language subject include a variety of approaches and techniques that enhance the learning process for students. Among these strategies are: 1- Active interaction: Students are encouraged to participate and actively participate in lessons through group discussions and interactive activities 2- Cooperative learning: It encourages cooperation among students through group work and group projects, where students cooperate with each other to achieve specific learning goals. 3- Practical application: Students are provided with opportunities to apply the acquired concepts and skills in practical and realistic contexts, which enhances effective interaction with the subject. 4- Using modern technologies: Students benefit from the use of technology in the learning process, such as using computers and the Internet for research and self-learning 5- Providing immediate feedback: Immediate feedback and continuous evaluation are provided to students, whether through oral or written evaluations

	6- Diversification in means of communication: A variety of means of communication and education are used, such as explanatory lectures, group discussions, and presentations, to meet the needs and different learning styles of students. 7- Using these strategies, interaction and effective learning are enhanced for students 8- Motivating them to participate and acquire skills and knowledge in a comprehensive interesting way.

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	2	مقدمة عن الاخطاء اللغوية – التاء المربوطة والطويلة والتاء المفتوحة		Through daily lectures	Through student discussion and daily tests
Week 2	2	فواعد كتابة الالف الممدودة والمقصورة – الحروف الشمسية والقمرية			
Week 3	2	الضاد والظاء			
Week 4	2	كتابة الهمزة			
Week 5	2	علامات الترقيم			
Week 6	2	الاسم والفعل والتفريق بينهما			
Week 7	2	المفاعيل.			
Week 8	2	العدد			
Week 9	2	تطبيقات الاخطاء اللغوية الشائعة			
Week 10	2	تطبيقات الاخطاء اللغوية الشائعة			
Week 11	2	النون والتنوين –معاني حروف الجر			

Week 12	2	الجوانب الشكلية للخطاب الاداري			
Week 13	2	لغة الخطاب الاداري			
Week 14	2	لغة الخطاب الاداري			
Week 15	2	نماذج من المراسلات الادارية			
Week 16	2	الاستعداد للامتحان النهائي			

• Course Evaluation

- Quizzes (2)(10%)
- Assignments (2)(10%)
- Report (1)(10%)
- Mid exam (20%)
- Final exam (50%)

• Learning and Teaching Resources

Required textbooks (curricular books, if any)	ملزمة اللغة العربية (المعممة من وزارة التعليم العالي والبحث العلمي)
Main references (sources)	.
Electronic References, Websites	The Collage E-Library

Course Description Form(4)

- Course Name:

Differential Mathematics

- Course Code:

ETT1104

- Semester / Year:

2023−2024 / 1st semester

- Description Preparation Date:

2023−3−6

- Available Attendance Forms:

In class

- Number of Credit Hours (Total) / Number of Units (Total)

150 hours / 6 units

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

Name: Naba'a fawzi
Email: /

- Course Objectives

Course Objectives	The module aims for the Differential Mathematics course are as follows: 1. To develop a solid understanding of the fundamental concepts and techniques of differential calculus and their relevance in engineering contexts. 2. To apply differentiation techniques effectively in solving engineering problems, including optimization, motion analysis, and cost and revenue optimization. 3. To demonstrate proficiency in working with transcendental functions, such as exponential, logarithmic, and inverse trigonometric functions, and their application in engineering. 4. To introduce the basics of differential equations and their importance in modeling and analyzing engineering systems, including growth and decay phenomena and electrical circuits. 5. To enhance problem-solving skills by applying differential calculus concepts to real-world engineering scenarios, fostering critical thinking and analytical abilities.

- Teaching and Learning Strategies

Strategy	The module on Differential Mathematics with a focus on engineering applications implements a range of effective learning and teaching strategies to foster student understanding and engagement. • Lectures introduce key concepts and problem-solving techniques, while interactive discussions facilitate student participation and real-world examples. Problem-solving sessions encourage active learning and collaboration, allowing students to apply differential calculus to engineering problems. • Practical applications are emphasized through case studies and simulations, highlighting the relevance of differential mathematics in an engineering context. Computer-based tools, tutorials, and workshops provide additional support, while assessments and independent study promote feedback and deeper exploration. • Guest speakers and practical projects bridge theory and practice, inspiring students and developing critical thinking skills. By integrating these strategies, the module cultivates a comprehensive understanding of differential mathematics in engineering and equips students with the skills needed for success in their engineering careers.

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	3	• Introduction to Differential Calculus. • Limits and Continuity. • Differentiation Rules: Power Rule, Product Rule, Quotient Rule, Chain Rule.		Through daily lectures	Through student discussion and daily tests
Week 2	3	• Derivatives of Trigonometric and Exponential Functions • Derivatives of Logarithmic and Inverse Trigonometric Functions • Implicit Differentiation			
Week 3	3	• Related Rates • Optimization Problems in Engineering • Curve Sketching: Critical Points, Inflection Points, Concavity			
Week 4	3	• L'Hôpital's Rule and Indeterminate Forms • Linear Approximation and Differentials			
Week 5	3	• Applications of Differentiation in Engineering: Rates of Change, Velocity, Acceleration • Motion Problems: Position, Velocity, and Acceleration Functions			
Week 6	3	• Optimization of Engineering Systems: Maximum and Minimum Problems • Optimization with Constraints			
Week 7	3	• Applications of Differentiation in Engineering: Marginal Analysis, Cost and Revenue Optimization • Linearization and Error Analysis			
Week 8	3	• Implicit Differentiation and Higher Derivatives • Related Rates with Engineering Applications			
Week 9	3	• Transcendental Functions: Derivatives of Exponential and Logarithmic Functions			

		• Applications of Transcendental Functions in Engineering			
Week 10	3	• Review of Differentiation Techniques • Higher Derivatives and Acceleration in Engineering			
Week 11	3	• Taylor Series Expansion and Applications • Linear Approximation and Estimation in Engineering			
Week 12	3	• Introduction to Differential Equations • First-Order Differential Equations: Separable Equations, Linear Equations			
Week 13	3	• Applications of Differential Equations in Engineering: Growth and Decay, RC Circuits			
Week 14	3	• Higher-Order Differential Equations and Engineering Applications • Spring-Mass Systems: Modeling and Analysis			
Week 15	3	• Systems of Differential Equations in Engineering: Electrical Circuits, Control Systems • Phase Plane Analysis: Stability and Classification			
Week 16	3	Preparatory week before the final Exam			

• Course Evaluation

- Quizzes (2)(10%)
- Assignments (2)(10%)
- Report (1)(10%)
- Mid exam (20%)
- Final exam (50%)

• Learning and Teaching Resources

Required textbooks (curricular books, if any)	K.A. Stroud and Dexter J. Booth, "Engineering Mathematics," 7th edition, Palgrave Macmillan, 2013.
Main references (sources)	E. Kreyszig, "Advanced Engineering Mathematics," 10th edition, Wiley, 2011.
Electronic References, Websites	https://www.coursera.org/browse/physical-science-and-engineering

Course Description Form(5)

• Course Name:
Engineering Workshops
• Course Code:
ETT1105
• Semester / Year:
2023−2024 / 1st semester
• Description Preparation Date:
2023−3−6
• Available Attendance Forms:
In class
• Number of Credit Hours (Total) / Number of Units (Total)
150 hours / 6 units
• Course administrator's name (mention all, if more than one name)
Name: Ali Dhahi Email: /

• Course Objectives	
Course Objectives	The module aims of the Electrical and Mechanical Workshop module are as follows: 1. To provide students with a comprehensive understanding of the principles and practices involved in electrical and mechanical workshops. 2. To familiarize students with the safety measures and precautions required in electrical and mechanical workshop environments. 3. To develop students' practical skills in using tools and equipment commonly used in electrical and mechanical workshops. 4. To introduce students to various electrical and mechanical processes, such as turning, filing, drilling, welding, and assembly. 5. To enhance students' knowledge of different types of machines, instruments, and materials used in electrical and mechanical workshops. 6. To provide hands-on experience and practical training in performing tasks related to electrical and mechanical workshop operations. 7. To develop students' problem-solving skills and critical thinking abilities through practical applications and troubleshooting scenarios. 8. To foster teamwork and effective communication skills by engaging students in group projects and collaborative workshop activities. 9. To instill an understanding of professional ethics and responsibility in the context of electrical and mechanical workshop practices. 10. To prepare students for future academic and professional pursuits in the fields of electrical engineering, mechanical engineering, and related disciplines.

• Teaching and Learning Strategies	
Strategy	The learning and teaching strategies for the Electrical and Mechanical Workshop module may include: 1. Lectures: The module may include lectures delivered by the instructor to introduce and explain the theoretical concepts, principles, and procedures related to electrical and mechanical workshop

	practices. Lectures can provide an overview of the topics, highlight key points, and provide examples and case studies. 2. Practical Demonstrations: Hands-on practical demonstrations can be conducted by the instructor to show students the proper usage of tools and equipment, safety precautions, and step-by-step procedures for various workshop tasks. This allows students to observe and understand the practical aspects of the subject. 3. Laboratory Sessions: Laboratory sessions provide students with the opportunity to apply their theoretical knowledge and practice their skills in a controlled workshop environment. Students can work on assigned tasks, conduct experiments, perform measurements, and troubleshoot electrical and mechanical systems under the guidance of the instructor. 4. Group Discussions: Group discussions can be facilitated to encourage active participation and collaboration among students. Students can discuss and analyze case studies, share their experiences, and exchange ideas and perspectives on workshop-related topics. This promotes critical thinking, problem-solving, and peer learning. 5. Workshops and Work-Based Learning: Organizing workshops and incorporating work-based learning experiences can enhance the practical skills of students. This may involve site visits to real-world electrical and mechanical workshops, where students can observe professional practices, interact with industry experts, and gain hands on experience in a professional setting. 6. Assignments and Projects: Assignments and projects can be assigned to students to further deepen their understanding of the subject matter. This may include tasks such as designing electrical installations, troubleshooting circuits, creating wiring diagrams, or conducting research on specific workshop-related topics. These assignments promote independent learning, research skills, and practical application of knowledge. 7. Assessments: Various forms of assessments can be used to evaluate students' understanding and progress. These may include written exams, practical assessments, laboratory reports, project presentations, and quizzes. Assessments provide feedback to students and allow them to demonstrate their knowledge, skills, and problem-solving abilities.

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	4	Principles of Industrial Safety in Electrical Workshops. • Electrical shock protection and safety measures. • Familiarization with tools used in electrical workshops. • Power sources and their characteristics. • Training on the use of a multimeter for measuring wire sizes.		Through daily lectures	Through student discussion and daily tests
Week 2	4	Different Types of Welding Irons (with different capacities) and Spot Welding • Proper usage techniques for different types of welding irons, including spot welding. • Introduction to electric transformers and their types. • Magnetic circuits in transformers.			

Week 3	4	Electric Circuits and Transformer Operation. • Opening transformers and gathering information from the old transformer for primary and secondary windings. • Measurement of wire diameters for the transformer. • Types of electric motors (single-phase and three-phase), example of shaded pole motor (small water pump motor).			
Week 4	4	Electrical Installations and Types of Wiring (Surface and Concealed) • Types of electrical installations (surface and concealed). • Concealed wiring within pipes. • Siemens wiring installation. • Drawing a lighting installation circuit with control circuit. • Practical exercise on wiring installation.			
Week 5	4	Parallel Wiring of Two Lamps with a Switch and Socket • Drawing a circuit diagram for two lamps wired in parallel with a switch and socket. • Practical application of the circuit. • Drawing the internal connection for a fluorescent lamp circuit. • Replacing one lamp with a fluorescent lamp.			
Week 6	4	Drawing a Staircase Lamp (Two-Way Switch) Circuit • Drawing a circuit diagram for a staircase lamp with two-way switches. • Practical application of the circuit.			
Week 7	4	Introduction to Electrical Relays, Types, Uses, Thermal Overload Relays, Time Delay Relays • Understanding electrical relays and their types.			

		• Applications and uses of relays. • Thermal overload relays and time delay relays.			
Week 8	4	Operation of Single-Face Motor with an Air Pick-Up and Push Button • Operating a single-face motor using an air pick-up and push button. • Operating the motor and changing its direction of rotation using relays and a time delay.			
Week 9	4	Introduction to Workshop Safety • Discuss the importance of safety in workshop environments. • Cover safety rules, personal protective equipment (PPE), emergency procedures, and hazardous material handling.			
Week 10	4	Turning Process and Instrumentation Measures • Explain the basics of the turning process, including lathe machine components and operations. • Discuss instrumentation measures used in turning, such as calipers, micrometers, and dial indicators.			
Week 11	4	Cutting Tools in Turning • Introduce different types of cutting tools used in turning, including lathe tools, inserts, and tool holders. • Explain tool geometry, selection criteria, and tool life considerations.			
Week 12	4	Practical Exercise - Horizontal Turning • Demonstrate horizontal turning on a lathe machine. • Guide students in practicing turning operations, such as facing, turning, and grooving, using appropriate cutting tools.			
Week 13	4	Turning Different Shapes • Teach students how to turn different shapes, such as tapers, chamfers, and			

		threads, on the lathe machine. • Cover techniques for creating internal and external threads and other complex shapes.			
Week 14	4	Introduction to Filing Process • Introduce the filing process and its applications in workshop activities. • Explain different types of files and their uses, including hand files, needle files, and rasp files.			
Week 15	4	Practical Exercise - Filing Process • Guide students in practicing filing techniques on various materials. • Demonstrate the correct filing motions, angles, and finishing methods for different surfaces and edges.			
Week 16	3	Preparatory week before the final Exam			

• Course Evaluation

1- Quizzes (2)(10%)
2- Assignments (2)(10%)
3- Lab (10%)
4- Report (1)(10%)
5- Mid exam (20%)
6- Final exam (50%)

• Learning and Teaching Resources

Required textbooks (curricular books, if any)	J. Smith and E. Johnson, "Electrical Engineering Workshop: Theory and Practice," .
Main references (sources)	D. Wilson and S. Thompson, "Mechanical Engineering Workshop: Principles and Applications," . عباس شياع علوان ،سمير خلف فياض ، ايناس عبد الكريم خالد" اسس الورش الهندسية" مطبعة جامعة بغداد ،رقم الايداع 3962 لسنة 2019
Electronic References, Websites	E-Library

Course Description Form(6)

• Course Name:
Human Rights and Democracy
• Course Code:
ETT1106
• Semester / Year:
2023−2024 / 1st semester
• Description Preparation Date:
2023−3−6
• Available Attendance Forms:
In class
• Number of Credit Hours (Total) / Number of Units (Total)
50 hours / 2 units
• Course administrator's name (mention all, if more than one name)
Name: Ali Kareem Email: /
• Course Objectives

Course Objectives	The module aims to: 1. To provide students with a comprehensive understanding of the historical development of human rights and their significance in contemporary society. 2. To familiarize students with the concept and characteristics of human rights, enabling them to analyze and evaluate various human rights issues and challenges. 3. To explore the different generations of human rights, their evolution over time, and the implications for individuals and communities. 4. To examine the role of human rights in ancient civilizations and Abrahamic religions, highlighting the contributions and influences of these historical contexts. 5. To investigate the international and regional recognition of human rights through the study of key charters, conventions, and declarations, enabling students to comprehend the global framework for human rights protection and promotion.
• Teaching and Learning Strategies	
Strategy	The module will employ various learning and teaching strategies to enhance students' understanding and engagement. These strategies will include: 1. Lectures: Traditional lectures will be delivered by the instructor to provide foundational knowledge and concepts related to human rights. Lectures will offer comprehensive explanations, historical context, and theoretical frameworks. 2. Discussions and Debates: Interactive discussions and debates will be conducted to encourage critical thinking and active participation. Students will have the opportunity to express their opinions, engage in thoughtful debates, and analyze different perspectives on human rights issues. 3. Case Studies: Real-life case studies will be examined to illustrate the application of human rights principles in different contexts. Students will analyze and discuss these cases to develop problem-solving skills and gain a deeper understanding of the practical implications of human rights. 4. Group Projects: Collaborative group projects will be assigned to promote teamwork and research skills. Students will work together on specific human rights topics, conduct research, and

present their findings to the class. This approach fosters teamwork, communication, and research abilities.

5. Guest Speakers: Inviting guest speakers, such as human rights activists, legal experts, or representatives from relevant organizations, will provide students with firsthand insights into the practical aspects of human rights work. Guest speakers can share their experiences, expertise, and engage in interactive discussions with students.

6. Multimedia Resources: Utilizing multimedia resources such as videos, documentaries, and online platforms will enhance students' understanding and engagement with human rights topics. These resources can present real-life examples, testimonies, and visual representations to complement the theoretical aspects of the module.

7. Critical Analysis and Reflection: Assignments and assessments will encourage students to critically analyze human rights issues, reflect on their personal perspectives, and evaluate the impact of human rights violations and advancements. This will develop their analytical skills and foster a deeper understanding of the complex nature of human rights.

8. Independent Study: Students will be encouraged to engage in independent study, including reading relevant textbooks, scholarly articles, and reports. This will enable them to deepen their understanding of specific human rights topics, broaden their knowledge base, and develop self-directed learning skills.

9. Overall, these learning and teaching strategies aim to create an interactive and engaging learning environment, fostering critical thinking, active participation, and a deeper understanding of human rights principles and their practical application.

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	2	Introduction to Human Rights (1 week). • Historical Development of Human Rights. • Concept and Characteristics of Human Rights. Importance and Relevance of Human Rights.		Through daily lectures	Through student discussion and daily tests
Week 2	2	Human Rights in Ancient Civilizations (1 week). • Examination of Human Rights in Ancient Societies. • Contributions of Ancient Civilizations to Human Rights Principles.			
Week 3	2	Human Rights in Abrahamic Religions (1 week). • Exploration of Human Rights in Judaism, Christianity, and Islam. • Emphasis on the Personality of Prophet Muhammad (PBUH) and his Contribution to Human Rights			
Week 4	2	Human Rights in the Medieval and Modern			

		Ages (1 week). • Evolution of Human Rights during the Middle Ages and Modern Era. • Impact of Enlightenment and Renaissance on Human Rights.			
Week 5	2	Contemporary International Recognition of Human Rights (1 week). • Analysis of International Human Rights Instruments and Treaties. • Focus on the Universal Declaration of Human Rights (1948).			
Week 6	2	Regional Recognition of Human Rights (1 week). • Examination of Regional Human Rights Systems and Mechanisms. • Exploration of Non-Governmental Organizations' Role in Promoting Human Rights.			
Week 7	2	Human Rights in International Charters (1 week). • Study of Key International Charters and Conventions. • In-depth Analysis of the Universal Declaration of Human Rights (1948).			
Week 8	2	Human Rights in National Constitutions (Iraqi Constitutions) (1 week). • Examination of Human Rights Provisions in Iraqi Constitutions. • Comparative Analysis of Constitutional Safeguards for Human Rights.			
Week 9	2	Human Rights in Iraq after 2003 (Iraqi Constitution 2005) (1 week). • Overview of Human Rights Developments in Iraq post-2003. • Analysis of the Iraqi Constitution of 2005 and its Impact on Human Rights.			

Week 10	2	Safeguards of Human Rights at Various Levels (1 week). • Exploration of International, Regional, and National Mechanisms for Protecting Human Rights. • Focus on Genocide as a Violation of Human Rights.			
Week 11	2	Financial and Administrative Corruption (1 week). • Understanding the Phenomenon of Financial and Administrative Corruption. • Causes and Consequences of Corruption and Efforts to Combat it.			
Week 12	2	: Right to Water and Sustainable Management (1 week). • Importance of the Right to Water as a Human Right. • Strategies for Sustainable Water Management and Ensuring Access to Clean Water.			
Week 13	2	Terrorism and its Impact on State and Society (1 week). • Examination of Terrorism and its Threat to Human Rights. • Analysis of Counter-Terrorism Measures and Balancing Human Rights Considerations.			
Week 14	2	Human Rights in Contemporary Issues (1 week). • Exploration of Current Human Rights Challenges and Debates. • Discussion on Emerging Human Rights Issues in the Modern World.			
Week 15	2	Review and Conclusion (1 week). • Recap of Key Concepts and Themes Covered in the Module. Discussion on the Importance of Upholding and Promoting Human Rights in Today's Society.			
Week 16	2	Preparatory week before the final Exam			

• Course Evaluation

1- Quizzes (2)(10%)
2- Assignments (2)(10%)
3- Report (1)(10%)
4- Mid exam (20%)
5- Final exam (50%)

• Learning and Teaching Resources

Required textbooks (curricular books, if any)	1- "حقوق الانسان في العالم العربي : القضايا والتحديات "تأليف علي حجازي ،وجمال شعت ، الطبعة : الطبعة الثانية العام: 2017 2- مبادئ حقوق الانسان : المفاهيم والقضايا الحديثة "، تأليف احمد المجالي وغسان حمدان ،الطبعة :الطبعة الاولى العام: 2019
Main references (sources)	1- "حقوق الانسان والديمقراطية "،تأليف : مصطفى كامل محمود .الطبعة :الطبعة الاولى ، العام :2015 2- "تاريخ حقوق الانسان في العصور القديمة والوسطى "، تأليف: نبيل رزق .الطبعة: الطبعة الثالثة ،العام :2012 3- "حقوق الانسان في العالم العربي :القضايا والتحديات "،تأليف: سعد الله عباس ، الطبعة: الطبعة الاولى ،العام :2014 4- "حقوق الانسان في العراق :المفهوم والتطور" تأليف: عبد الكريم السامرائي ،الطبعة: الطبعة الاولى ،العام :2018 5- "حقوق الانسان في العراق بين التحديات والافاق " تأليف :محمد السامرائي ولقاء الحربي ، الطبعة : الطبعة الاولى ، العام :2020
Electronic References, Websites	The Collage E-Library

Course Description Form(7)

• Course Name:
Engineering Mechanics
• Course Code:
EET1201
• Semester / Year:
2023−2024 / 2nd semester
• Description Preparation Date:
2023−3−6
• Available Attendance Forms:
In class
• Number of Credit Hours (Total) / Number of Units (Total)
150 hours / 6 units
• Course administrator's name (mention all, if more than one name)
Name: Ali Dhahi Email: /
• Course Objectives

Course Objectives	The module aims to: 1. To introduce students to the fundamental concepts and principles of Mechanics Engineering. 2. To develop students' ability to analyze and solve engineering problems related to statics, dynamics, and equilibrium of forces. 3. To enhance students' critical thinking and problem-solving skills in the context of mechanical systems and components. 4. To foster practical knowledge and hands-on experience through laboratory experiments and application of theoretical concepts. 5. To prepare students for further studies or professional careers in engineering by providing a solid foundation in Mechanics Engineering principles and methodologies.
• Teaching and Learning Strategies	
Strategy	The module will employ the following learning and teaching strategies: 1. Lectures: Traditional lectures delivered by the instructor to present key concepts, theories, and principles of Mechanics Engineering. Lectures may include visual aids, demonstrations, and examples to enhance understanding and facilitate knowledge transfer. 2. Laboratory Sessions: Practical hands-on laboratory sessions where students can apply theoretical concepts to real-world situations. Students may perform experiments, measurements, and data analysis, gaining practical skills and reinforcing their understanding of Mechanics Engineering principles. 3. Problem-Solving Sessions: Interactive problem-solving sessions where students work individually or in groups to solve engineering problems related to mechanics. This strategy allows students to practice critical thinking, analytical skills, and the application of theoretical knowledge to practical scenarios. 4. Tutorials: Small-group or one-on-one tutorials where students can seek clarification on difficult concepts, discuss challenging problems, and receive personalized guidance from the instructor. Tutorials provide opportunities for active engagement, individualized support, and deeper comprehension of the subject matter.

	5. Group Projects: Collaborative group projects that require students to apply their knowledge of Mechanics Engineering to solve complex problems or design projects. This strategy encourages teamwork, communication skills, and the integration of multiple concepts and skills acquired throughout the module.

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	4	• Introduction to Engineering Mechanics • Statics and Dynamics • Basic Concepts and Definitions		Through daily lectures	Through student discussion and daily tests
Week 2	4	• Forces: Types, Characteristics, and Properties • Force Vectors and Components • Resultant and Equilibrium of Forces			
Week 3	4	• Moments and Couples • Moment of a Force • - Moments and Equilibrium			
Week 4	4	• Free-Body Diagrams • Equilibrium of Planar Forces • Two-Dimensional Force Systems			
Week 5	4	• Distributed Forces: Centroids and Centers of Gravity • Centroid of Plane Areas • Centroid of Composite Bodies			
Week 6	4	• Moment of Inertia • Moments of Inertia for Plane Areas • Parallel-Axis Theorem			
Week 7	4	• Principles of Virtual Work • Equilibrium of Rigid Bodies • Trusses and Frames			
Week 8	4	• Friction: Types and Laws • Frictional Forces and Equilibrium • Applications of Friction			
Week 9	4	• Kinetics: Forces and Motion • Newton's Laws of Motion • Linear and Angular Momentum			

Week 10	4	• Kinetics: Forces and Motion • Newton's Laws of Motion • Linear and Angular Momentum			
Week 11	4	• Work and Energy • Principle of Work and • Conservation of Mechanical Energy			
Week 12	4	• Power and Efficiency • Impulse and Momentum • Impact and Collision			
Week 13	4	• Rotational Dynamics • Moment of Inertia for Rigid Bodies • Angular Momentum and Torque			
Week 14	4	• Vibrations and Oscillations • Free Vibrations and Harmonic Motion • Damping and Resonance			
Week 15	4	• Review and Recapitulation • Problem-Solving Techniques			
Week 16	4	Preparatory week before the final Exam			

• Course Evaluation

1- Quizzes (2)(10%)
2- Assignments (2)(10%)
3- Lab (1)(10%)
4- Report (1)(10%)
5- Mid exam (10%)
6- Final exam (50%)

• Learning and Teaching Resources

Required textbooks (curricular books, if any)	Bedford and W. Fowler, "Engineering Mechanics: Statics," 5th ed. Upper Saddle River, NJ: Pearson, 2008.
Main references (sources)	R. C. Hibbeler, "Engineering Mechanics: Dynamics," 14th ed. Boston, MA: Pearson, 2015.
Electronic References, Websites	The Collage E-Library

Course Description Form(8)

- Course Name:

English Language (Beginner)

- Course Code:

EET1202

- Semester / Year:

2023−2024 / 2nd semester

- Description Preparation Date:

2023−3−6

- Available Attendance Forms:

In class

- Number of Credit Hours (Total) / Number of Units (Total)

50 hours / 2 units

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

Name: Reda ahmed sadiq
Email: /

- Course Objectives

Course Objectives	The module aims of English Language (Beginner) are designed to help learners at the beginner level develop their English language skills and achieve specific learning objectives. While I don't have access to the specific module aims of this coursebook, I can provide you with a general outline of the typical aims for a beginner-level English course: 1. To introduce beginner-level learners to the English language, focusing on building vocabulary and acquiring essential language structures. 2. To develop listening and speaking skills through interactive activities and engaging in basic conversational practice. 3. To enhance reading comprehension abilities by introducing simple texts and emphasizing vocabulary and sentence structures. 4. To provide foundational writing skills, including sentence formation, paragraph writing, and completing basic forms. 5. To cultivate cultural awareness and equip learners with practical language skills for everyday situations, such as ordering food, shopping, and asking for directions.

- Teaching and Learning Strategies

Strategy	The learning and teaching strategies for the English Language (Beginner) module may include: 1. Interactive Language Practice: Engage learners in communicative activities that promote active participation and language practice. This can include pair work, group discussions, role-plays, and language games. 2. Authentic Materials: Incorporate authentic materials such as videos, audio recordings, and reading texts that reflect real-life language use. This helps learners develop their listening, speaking, reading, and writing skills in authentic contexts. 3. Task-Based Learning: Design tasks and projects that require learners to use the target language to accomplish specific goals or solve problems. This promotes meaningful language use and encourages critical thinking and problem-solving skills.

	4. Visual Aids and Multimedia: Utilize visual aids, charts, diagrams, and multimedia resources to support language learning and comprehension. Visuals can enhance understanding, aid in vocabulary acquisition, and provide context for language use. 5. Error Correction and Feedback: Provide timely and constructive feedback on learners' language production to help them identify and correct errors. Encourage self-correction and peer correction to foster a supportive learning environment.

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	2	• Hello!		Through daily lectures	Through student discussion and daily tests
Week 2	2	• Your world.			
Week 3	2	• All about you.			
Week 4	2	• Family and friends.			
Week 5	2	• The way I live.			
Week 6	2	• Every day			
Week 7	2	• My favourites.			
Week 8	2	• Where I live. • Times past.			
Week 9	2	• We had a great time! • I can do that!			
Week 10	2	• Please and thank you. • Here and now.			
Week 11	2	• It's time to go! • Getting to know you.			

Week 12	2	• The way we live. • It all went wrong.			
Week 13	2	• Let's go shopping!			
Week 14	2	• What do you want to do?			
Week 15	2	• Tell me! What's it like?			
Week 16	2	Preparatory week before the final Exam			

• Course Evaluation

1- Quizzes (2)(10%)
2- Assignments (2)(10%)
3- Report (1)(10%)
4- Mid exam (20%)
5- Final exam (50%)

• Learning and Teaching Resources

Required textbooks (curricular books, if any)	• Soars, J., Soars, L. (2014). New Headway Plus: Beginner Student's Book. United Kingdom: Oxford University Press. • Soars, J., Soars, L. (2006). New Headway Plus: Pre intermediate. United Kingdom: Oxford University Press.
Main references (sources)	Audio CDs or Online Audio: Recordings of listening exercises, dialogues, and pronunciation practice.
Electronic References, Websites	

Course Description Form(9)

• Course Name:
Engineering Drawing
• Course Code:
EET1203
• Semester / Year:
2023−2024 / 2nd semester
• Description Preparation Date:
2023−3−6
• Available Attendance Forms:
In class
• Number of Credit Hours (Total) / Number of Units (Total)
125 hours / 5 units
• Course administrator's name (mention all, if more than one name)
Name: sarah Taheer Email: /
• Course Objectives

Course Objectives	The module aims for the Basics of Engineering Drawing course are as follows: 1. To demonstrate proficiency in creating and interpreting engineering drawings: Develop the skills to create accurate and detailed engineering drawings using both manual drafting techniques and computer-aided drafting (CAD) software. Additionally, gain the ability to interpret and understand engineering drawings, including orthographic projections, sections, and assembly drawings. 2. To apply industry standards and practices: Understand and apply the relevant industry standards and practices for engineering drawing, such as dimensioning, tolerancing, and geometric dimensioning and tolerancing (GD&T). Ensure that drawings are compliant with applicable standards to facilitate effective communication and manufacturing processes. 3. To develop spatial visualization skills: Enhance your ability to visualize and mentally manipulate objects in three-dimensional space based on two-dimensional drawings. Strengthen your spatial awareness and improve your understanding of complex engineering designs. 4. To demonstrate effective communication of technical information: Acquire the skills to communicate technical information clearly and accurately through annotations, notes, and drawing presentations. Enhance your ability to convey design intent, dimensions, and specifications to other stakeholders, such as engineers, manufacturers, and clients. 5. To apply critical thinking and problem-solving skills in engineering drawing: Develop the ability to analyze and solve engineering drawing problems, such as identifying and resolving dimensional conflicts, addressing design issues, and ensuring proper fit and function of components. Apply critical thinking skills to evaluate and improve the quality and accuracy of engineering drawings.

• Teaching and Learning Strategies

Strategy	When it comes to learning and teaching engineering drawing using AutoCAD, there are several strategies that can be effective. Here are some recommendations: 1. Familiarize with the Software: Before diving into engineering drawing concepts, it's important to become familiar with the AutoCAD software. This includes understanding the user interface, basic tools, and commands. Start with introductory tutorials or online resources that cover the basics of AutoCAD. 2. Start with Fundamentals: Begin by teaching the fundamental concepts of engineering drawing, such as orthographic projection, isometric projection, dimensioning, and tolerancing. Explain the principles and techniques used in creating accurate and clear technical drawings. 3. Hands-on Practice: Engineering drawing is a practical skill, so provide ample opportunities for hands-on practice. Assign exercises and projects that require students to create different types of drawings using AutoCAD. Encourage them to explore and experiment with various tools and commands. 4. Step-by-Step Instructions: Break down complex drawing tasks into smaller, manageable steps. Provide step-by-step instructions and demonstrations using AutoCAD, showing students how to execute each step effectively. This approach helps students understand the workflow and build their confidence. 5. Visual Aids and Examples: Utilize visual aids, such as slides, diagrams, and examples, to reinforce concepts. Show real-world engineering drawings and explain how they were created using AutoCAD. Visual representations can enhance understanding and make abstract concepts more tangible. 6. Group Activities and Collaboration: Promote collaboration among students by assigning group activities or projects. This allows them to work together, share knowledge, and learn from one another. Encourage students to discuss their approaches and problem-solving techniques related to engineering drawing in AutoCAD. 7. Provide Feedback: Regularly provide constructive feedback on students' drawings. Highlight areas for improvement, suggest alternative methods, and point out common mistakes. This feedback loop is crucial for students to refine their skills and develop a deeper understanding of engineering drawing principles. 8. Stay Updated with AutoCAD Features: AutoCAD is regularly updated with new features and enhancements. Stay up to date with these changes to ensure you're teaching the latest tools and workflows. Familiarize yourself with new capabilities that can improve efficiency and accuracy in engineering drawing. 9. Online Resources and Communities: Encourage students to explore online resources, tutorials, and communities dedicated to AutoCAD and engineering drawing. There are numerous websites, forums, and YouTube channels that offer valuable content and support for learning AutoCAD. 10. Project-Based Learning: Incorporate project-based learning into the curriculum, where students can apply their engineering drawing skills to real-world scenarios. Assign projects that simulate industry-related tasks, such as creating architectural plans, mechanical assemblies, or electrical schematics using AutoCAD.

• Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	4	• Introduction to Engineering Drawing : • Importance and applications of engineering drawing. • Drawing instruments and materials. Drawing standards and conventions.!		Through daily lectures	Through student discussion and daily tests

Week 2	4	Lines and Lettering • Types of lines used in engineering drawing. • Line weights and line quality. Techniques for freehand lettering and title block.			
Week 3	4	Geometric Construction • Basic geometric shapes and their construction methods. • Construction of angles, triangles, and polygons. Division of lines and angles.			
Week 4	4	Orthographic Projection • Introduction to orthographic projection. • Multiview projection and views of an object. Drawing orthographic views of simple objects.			
Week 5	4	Sectional Views • Introduction to sectional views. • Types of sectional views (full, half, offset). Drawing sectional views of objects.			
Week 6	4	Dimensioning and Tolerancing • Introduction to dimensioning and tolerancing. • Types of dimensions (linear, angular, radial). Geometric dimensioning and tolerancing (GD&T).			
Week 7	4	Auxiliary Views: • Introduction to auxiliary views. • Drawing auxiliary views to show true shape and size of inclined surfaces.			
Week 8	4	Pictorial Drawings • Introduction to pictorial drawings (isometric, oblique, perspective). • Drawing isometric and oblique pictorial views. Creating exploded views.			
Week 9	4	Screw Threads and Fasteners • Introduction to screw threads. • Types of screw threads and thread representation. Drawing standard fasteners (bolts, nuts, screws).			

Week 10	4	Assembly Drawings • Introduction to assembly drawings. • Drawing exploded views and assembly details. Bill of materials (BOM) and part numbering.			
Week 11	4	Introduction to CAD (Computer-Aided Design) • Overview of CAD software and its benefits. • Introduction to basic CAD tools and commands. Creating simple drawings using CAD software.			
Week 12	4	• Isometric Projection • Introduction to isometric projection. • Drawing isometric views of simple objects. Solving problems using isometric projection.			
Week 13	4	Electrical and Electronic Symbols • Introduction to electrical and electronic symbols. • Drawing basic electrical and electronic circuits. Wiring diagrams and schematic symbols.			
Week 14	4	Engineering Drawings for Manufacturing • Introduction to manufacturing drawings. • Drawing detailed views and dimensioning for manufacturing. Introduction to tolerances and fits.			
Week 15	4	Review and Project Work • Review of course topics and concepts. • Project work involving the application of engineering drawing principles.			
Week 16	4	Preparatory week before the final Exam			

- Course Evaluation

1- Quizzes (2)(10%)
2- Assignments (2)(10%)
3- Lab (14)(10%)
4- Report (14)(10%)

5- Mid exam (10%) 6- Final exam (50%)

• Learning and Teaching Resources

Required textbooks (curricular books, if any)	D. A. Madsen, D. P. Madsen, and J. E. Briesacher, Engineering Drawing and Design, 5th ed., Clifton Park, NY: Delmar Cengage Learning, 2011.
Main references (sources)	F. E. Giesecke, A. Mitchell, H. C. Spencer, I. L. Hill, and J. T. Dygdon, Technical Drawing with Engineering Graphics, 15th ed., Upper Saddle River, NJ: Pearson, 2016.
Electronic References, Websites	https://www.coursera.org/browse/physical-science-and-engineering

Course Description Form(10)

• Course Name:
AC Electrical Circuits
• Course Code:
EET1204
• Semester / Year:
2023−2024 / 2nd semester
• Description Preparation Date:
2023−3−6
• Available Attendance Forms:
In class
• Number of Credit Hours (Total) / Number of Units (Total)
125 hours / 5 units
• Course administrator's name (mention all, if more than one name)
Name: Asmaa ali jaish Email: /

• Course Objectives	
Course Objectives	The module aims to: 1. To provide a comprehensive understanding of alternating current (AC), including its principles, characteristics, and waveform representation, as well as the significance of RMS value and average value in AC circuits. 2. To develop proficiency in working with phasor quantities, including their definition, representation in polar and rectangular forms, and the ability to perform arithmetic operations such as multiplication, division, addition, and subtraction. 3. To analyze resonance circuits, both in series and parallel configurations, in order to determine conditions for resonance, calculate key parameters such as current, voltage, impedance, phase angle, and frequency at resonance, and evaluate bandwidth and quality factor. 4. To investigate the impact of AC on different circuit configurations, ranging from resistance-only circuits to circuits with pure inductance or capacitance, as well as combinations of resistance, inductance, and capacitance. This includes determining phase angles between current and voltage for each circuit type. 5. To explore the concept of power in AC circuits, encompassing the calculation of power in circuits with various components (resistance, inductance, capacitance) in series and parallel. Additionally, to comprehend active and reactive power, power factor, and techniques to improve power factor. The course will also cover the application of theories such as Norton's theorem, Thevenin's theorem, and impedance matching in AC circuits.

• Teaching and Learning Strategies	
Strategy	The learning and teaching strategies for the AC Circuits module can vary depending on the specific educational institution and instructor. However, here are some common strategies that can be effective for teaching this module: • Lectures: Conducting lectures to introduce and explain fundamental concepts, principles, and

	theories related to AC circuits. This can include providing clear explanations, using visual aids such as slides or demonstrations, and engaging students through interactive discussions. • Practical Demonstrations: Organizing practical demonstrations or laboratory sessions where students can observe and interact with real AC circuits. This hands-on experience allows them to apply theoretical knowledge, perform measurements, and analyze circuit behavior. • Problem-Solving Sessions: Facilitating problem-solving sessions to enhance students' understanding of AC circuit analysis and calculation techniques. This involves presenting practice problems of increasing complexity and guiding students in step-by-step problem-solving strategies. • Simulations and Virtual Labs: Utilizing computer simulations and virtual laboratory environments to provide interactive and immersive experiences. This allows students to simulate and analyze AC circuits, observe waveforms, and manipulate circuit parameters, reinforcing their understanding of concepts and principles. • Group Discussions and Collaborative Learning: Encouraging group discussions and collaborative learning activities where students can actively engage with their peers. This can involve solving problems as a group, analyzing case studies, or engaging in debates and discussions to deepen their understanding of AC circuit concepts. • Multimedia Resources: Incorporating multimedia resources such as online videos, interactive animations, and virtual tools to supplement lectures and provide additional visual representations of AC circuit phenomena. • Assessments and Feedback: Implementing formative and summative assessments to evaluate students' understanding and progress. This can include quizzes, assignments, laboratory reports, and examinations. Providing timely feedback on assessments helps students identify areas of improvement and reinforces their learning. • Self-Study Materials: Recommending textbooks, reference materials, and online resources for students to further explore AC circuit concepts independently. This promotes self-directed learning and allows students to deepen their understanding at their own pace. By employing a combination of these strategies, instructors can create an engaging and effective learning environment for students studying AC circuits.

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	6	AC Quantities: • Definition and characteristics of alternating current • Generation and waveform representation of AC • Relationships and definitions of RMS value, average value, and their significance • Finding the form factor and crest factor for irregular waveforms with practical examples		Through daily lectures	Through student discussion and daily tests
Week 2	6	Phasor Quantities: • Definition of phasor quantities • Representation of phasors in polar and rectangular forms • Calculation of phase angle • Operations on phasor quantities including multiplication, division, addition, and subtraction			

		with practical examples			
Week 3	6	Resonance Circuits: • Series and parallel resonance circuits • Definition and conditions for resonance • Calculation of current, voltage, impedance, phase angle, and frequency at resonance • Determining bandwidth and quality factor • Graphical representation of the relationship between inductive and capacitive reactance with frequency • Example problems for both series and parallel resonance cases			
Week 4	6	Effect of Alternating Current on Circuits: • Circuit with resistance only • Circuit with pure inductance only • Circuit with pure capacitance only • Determining the phase angle between current and voltage for each circuit with examples.			
Week 5	6	Effect of Alternating Current on Circuits: • Circuit with resistance and inductance in series • Circuit with resistance and capacitance in series • Circuit with resistance, inductance, and capacitance in series • Finding the relationship between current and voltage in the three cases, including phase angle and total circuit impedance, with practical examples.			

Week 6	6	Effect of Alternating Current on Circuits: • Circuit with resistance and inductance in parallel • Circuit with resistance and capacitance in parallel • Circuit with resistance, inductance, and capacitance in parallel			
Week 7	6	• Using the J-operator or the composite operator for finding total impedance, total admittance, current, voltage, and phase angle for resistors connected in series and parallel circuits, with example problem-solving			
Week 8	6	• Application of theories such as Norton's theorem, Thevenin's theorem, and impedance matching in alternating current circuits, with example problem-solving.			
Week 9	6	• Power in AC circuits, including calculating power in circuits containing (resistance only, inductance only, capacitance only, resistance, inductance, and capacitance in series and parallel). Definition of active and reactive power and how to calculate them. • Total apparent power (definition), drawing the power triangle, power factor, its definition, and its effect on AC circuits. How to improve power factor with practical examples.			
Week 10	6	• Maximum power transfer theory in AC circuits, deriving the corresponding relationship with practical examples. • Analysis of electric networks using the nodal voltage method, introduction, nodal voltages, number of nodal voltage equations, nodal voltage equations by inspection, common tolerance, transition tolerance. • Practical examples of			

		electric network analysis using the nodal method.			
Week 11	6	• Three-phase AC circuits, definition, and generation of three-phase AC current (single phase, two phases, three phases) with drawing the connections in star and delta configurations in three-phase AC circuits and the special relationships for calculating line current, phase current, total power, and line power, phase power. Advantages of each connection when used with balanced and unbalanced loads, with example problem-solving. • Solving practical examples regarding three-phase AC current with delta and star connections for balanced and unbalanced loads.			
Week 12	6	• Methods of power measurement for three-phase loads: Wattmeter, how to connect it to the circuit to measure active power and calculate reactive power and apparent power, with an example problem. Power measurement using a wattmeter and voltage, how to find total power using this method in both star and delta connections, using two watt meters, and using three watt meters.			
Week 13	6	• Transient cases in circuits: Transient cases in DC current, circuits in transient cases (RLC, RC, RL circuits). • Transient AC currents: Transient AC currents in RLC, RC, RL circuits, transient currents.			
Week 14	6	• Self-inductance of a coil (electromagnetic induction): Definition, special relationships to find self-inductance of a coil, mutual inductance between two coils, relationships to find mutual inductance based			

		on the type of coil connection, including: a. Series aiding connection and b. Series-opposing connection. • Transformers: Transformer construction, drawing the transformer, its characteristics, operating principle, and special relationships. Types of transformers and problem-solving.			
Week 15	6	• Self-inductance of a coil (electromagnetic induction): Definition, special relationships to find self-inductance of a coil, mutual inductance between two coils, relationships to find mutual inductance based on the type of coil connection, including: a. Series aiding connection and b. Series-opposing connection. • Transformers: Transformer construction, drawing the transformer, its characteristics, operating principle, and special relationships. Types of transformers and problem-solving.			
Week 16	6	Preparatory week before the final Exam			

• Course Evaluation

1- Quizzes (2)(10%)
2- Assignments (2)(10%)
3- Lab (1)(10%)
4- Report (1)(10%)
5- Mid exam (10%)
6- Final exam (50%)

• Learning and Teaching Resources

Required textbooks (curricular books, if any)	J. W. Nilsson and S. A. Riedel, "Electric Circuits," 11th ed. Boston, MA: Pearson, 2018.
Main references (sources)	E. M. Purcell, "Electricity and Magnetism," 3rd ed. Cambridge, MA: Cambridge University Press, 2013.

Electronic References, Websites	The Collage E-Library

Course Description Form(11)

• Course Name:
Integral Mathematics
• Course Code:
EET1205
• Semester / Year:
2023−2024 / 2nd semester
• Description Preparation Date:
2023−3−6
• Available Attendance Forms:
In class
• Number of Credit Hours (Total) / Number of Units (Total)
150 hours / 6 units
• Course administrator's name (mention all, if more than one name)
Name: mohammed hilal Email: /

• Course Objectives	
Course Objectives	The module aims to: 1. To provide students with a comprehensive understanding of integration principles and techniques, including both indefinite and definite integration. 2. To equip students with the necessary skills to integrate various types of functions, such as trigonometric, inverse trigonometric, logarithmic, exponential, and hyperbolic functions. 3. To enable students to apply integration methods to solve practical problems and real-world applications, including finding areas, lengths of curves, surface areas, and volumes of solids. 4. To foster critical thinking and analytical skills by challenging students with a variety of integration problems and encouraging them to develop efficient problem-solving strategies. 5. To prepare students for advanced mathematical studies and future disciplines that require a strong foundation in integration, such as physics, engineering, economics, and computer science.

• Teaching and Learning Strategies	
Strategy	The module will employ the following learning and teaching strategies: 1. Lectures and Demonstrations: In-class lectures and demonstrations provide a structured approach to presenting the theoretical concepts of integration. The instructor can explain key concepts, demonstrate integration techniques, and provide examples to illustrate their application. 2. Problem-Solving Sessions: Regular problem-solving sessions allow students to actively engage with integration problems. These sessions can involve individual or group work, where students can practice applying integration techniques to solve a variety of problems and receive immediate feedback from the instructor. 3. Interactive Discussions: Engaging students in interactive discussions fosters critical thinking and deeper understanding of integration concepts. The instructor can facilitate discussions on integration strategies, real-world applications, and the connection between integration and other mathematical topics.

	4. Practical Application Exercises: Assigning practical application exercises specific to electrical engineering helps students see the relevance of integration in their field of study. These exercises may involve solving engineering problems related to circuit analysis, signal processing, or electromagnetic theory using integration techniques. 5. Technology-Assisted Learning: Utilizing technology tools, such as computer software or online resources, can enhance learning and visualization of integration concepts. Students can use mathematical software to perform numerical integrations, graph functions, and explore the graphical interpretations of integration results.

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	6	• Indefinite Integration: Basic principles of integration, indefinite integrals, and integration rules for trigonometric functions.		Through daily lectures	Through student discussion and daily tests
Week 2	6	• Integration of Inverse Trigonometric Functions: Techniques for integrating inverse trigonometric functions.			
Week 3	6	• Integration of Logarithmic and Exponential Functions: Methods for integrating logarithmic and exponential functions.			
Week 4	6	• Integration of Hyperbolic Functions • Techniques for integrating hyperbolic functions.			
Week 5	6	• Integration Methods • Further integration methods, including integration by substitution and integration by parts.			
Week 6	6	• Definite Integration • Introduction to definite integration, evaluating definite integrals, and applications in finding areas between curves.			
Week 7	6	• Applications of Definite Integration • Calculating the length of curves and determining surface areas using definite integration.			
Week 8	6	• Volumes of Solids • Using integration to find volumes of solids, including solids of revolution and cross			

		sectional areas.			
Week 9	6	• Applications in Physics • Applying definite integration to solve physics problems involving motion, work, and fluid forces.			
Week 10	6	• Techniques of Integration Review • Reviewing and practicing integration techniques, including substitution, integration by parts, and trigonometric substitution.			
Week 11	6	• Area Between Curves • Exploring methods for finding the area between two curves and applying them to practical problems.			
Week 12	6	• Length of Curves • Calculating the length of curves using integration techniques.			
Week 13	6	• Surface Area • Determining the surface area of three-dimensional objects using integration methods.			
Week 14	6	• Review and Exam Preparation • Comprehensive review of the topics covered throughout the module and preparation for final exams.			
Week 15	6	• Assessment covering the concepts and applications of integral mathematics.			
Week 16	6	Preparatory week before the final Exam			

- Course Evaluation

1- Quizzes (2)(10%)
2- Assignments (2)(10%)
3- Report (1)(10%)
4- Mid exam (20%)
5- Final exam (50%)

• Learning and Teaching Resources

Required textbooks (curricular books, if any)	"Calculus: Early Transcendentals" by James Stewart (8th Edition, Cengage Learning, 2015).
Main references (sources)	"Advanced Engineering Mathematics" by Erwin Kreyszig (10th Edition, Wiley, 2011).
Electronic References, Websites	The Collage E-Library

Course Description Form(12)

• Course Name:
Computer Principles
• Course Code:
EET1206
• Semester / Year:
2023−2024 / 2nd semester
• Description Preparation Date:
2023−3−6
• Available Attendance Forms:
In class
• Number of Credit Hours (Total) / Number of Units (Total)
75 hours / 3 units
• Course administrator's name (mention all, if more than one name)
Name: karrar Haider Email: /
• Course Objectives

Course Objectives	The module aims to: 1. To introduce students to the fundamental concepts of computers, including their evolution, advantages, and classification based on purpose, size, and data type. 2. To familiarize students with the physical components of a computer and software entities, highlighting their roles in computer operations. 3. To promote awareness of computer security, ethics, and intellectual property rights, emphasizing the types of violations and measures for protection. 4. To provide an overview of operating systems, their functions, classifications, and examples, with a focus on the Windows 11 operating system and its desktop components. 5. To equip students with practical knowledge of computer usage and maintenance, covering file organization, software installation, common computer settings, and promoting responsible practices. 6. These aims and indicative contents aim to achieve a comprehensive understanding of computer fundamentals, security, operating systems, and proper computer usage and maintenance.
• Teaching and Learning Strategies	
Strategy	The learning and teaching strategies for the module on Computer Principles and operating systems can include: 1. Lectures and Presentations: The instructor can deliver lectures and presentations to introduce and explain key concepts, theories, and principles related to computer fundamentals and operating systems. This can help students develop a foundational understanding of the subject matter. 2. Practical Demonstrations: Hands-on practical demonstrations can be conducted to illustrate the usage of different computer components, software applications, and operating system functionalities. This can enhance students' understanding of the practical aspects of computer systems. 3. Group Discussions and Collaborative Learning: Engaging students in group discussions and collaborative learning activities can promote active participation and deeper understanding.

	Students can discuss and analyze case studies, real-life examples, and scenarios related to computer fundamentals and operating systems. 4. Laboratory Exercises: Practical laboratory exercises can provide students with opportunities to apply their knowledge and skills in a controlled environment. They can work on computer hardware, software installations, operating system configurations, and troubleshooting tasks, allowing them to gain practical experience. 5. Assignments and Projects: Assignments and projects can be assigned to students to encourage independent learning and critical thinking. They can involve research, analysis, problem-solving, and the application of concepts learned in the module. This can help students develop their skills and deepen their understanding.

- Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
Week 1	3	• Introduction to Computer Fundamentals. • Concept of a Computer.		Through daily lectures	Through student discussion and daily tests
Week 2	3	• Stages of the Computer Life Cycle. • Evolution of Computer Generations.			
Week 3	3	• Advantages of Computers and their Applications. • Classification of Computers based on Purpose, Size, and Data Type.			
Week 4	3	• Computer Components: Physical Components of a Computer. • Computer Components: Software Entities.			
Week 5	3	• Personal Computers. • Concept of Computer Security and Software Licenses.			
Week 6	3	• Software Licenses: Types and Importance. • Intellectual Property.			
Week 7	3	• Software Licenses: Types and Importance. • Intellectual Property.			
Week 8	3	• Cyber Intrusions and Malicious Software. • Steps for Protecting Against Hacking.			

Week 9	3	• Health Effects of Computers. • Introduction to Operating Systems.			
Week 10	3	• Functions and Objectives of Operating Systems. • Classification of Operating Systems.			
Week 11	3	• Examples of Different Operating Systems. • Windows 11 Operating System.			
Week 12	3	• Desktop Components. • Start Menu and Taskbar.			
Week 13	3	• Folders and Files. • Icons and Operations on Windows.			
Week 14	3	• Desktop Wallpapers. • Control Panel: Categories and Functions. • File Organization and Maintenance.			
Week 15	3	• Installing and Uninstalling Programs. • Common Computer Settings: Printer Management, Time and Date Settings, Primary Disk Maintenance.			
Week 16	6	Preparatory week before the final Exam			

• Course Evaluation

1- Quizzes (2)(10%)
2- Assignments (2)(10%)
3- Lab(1)(10%)
4- Report (1)(10%)
5- Mid exam (20%)
6- Final exam (50%)

• Learning and Teaching Resources

Required textbooks (curricular books, if any)	R. E. Bryant and D. R. O'Hallaron, "Computer Systems: A Programmer's Perspective," 2019.
Main references (sources)	G. Brookshear and D. Brylow, "Computer Science: An Overview," 2020.
Electronic References, Websites	The Collage E-Library