MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Fundamentals of Astronomy**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☒ **Tutorial** ☐ **Practical** ☒ **Seminar**	
Module Code	**AST1101**				
ECTS Credits	**8**				
SWL (hr/sem)	**200**				
Module Level		1	**Semester of Delivery**		1
Administering Department		**Department of Astronomy and Space**	**College**	**College of Science**	
Module Leader	**Dr.Abdullah K Ahmed**		**e-mail**	**abdullah.ahmed@sc.uobaghdad.edu.iq**	
Module Leader's Acad. Title		**Assist.Prof**	**Module Leader's Qualification**	**Ph.D.**	
Module Tutor	**Hayder R Hussain**		**e-mail**	**hayder.hussein1107@sc.uobaghdad.edu.iq**	
Peer Reviewer Name		**Dr.Duraid A Mohammed**	**e-mail**	**duraid.mohammed@sc.uobaghdad.edu.iq**	
Scientific Committee Approval Date		**19/06/2023**	**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	Non	**Semester**	
Co-requisites module	Non	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1. This module provides an introduction to Astronomy and the foundations for Astrophysics courses in second semester 2. This module will introduce some of the fundamental principles which underpin modern astronomy and astrophysics. The module will begin by introducing some of the most exciting challenges facing modern astronomers today. The module will examine how astronomy developed from philosophy into a modern science, with particular reference to the scientific method. This discussion will lead to the introduction of the key concepts of optics on which optical telescopes rely. The module will conclude by discussing the nature of light and its uses
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Theoretical and practical scientific expertise and skills related to astronomy. 2. Skills and abilities in operating and using scientific instruments, ground-based optical and radio telescopes, high-sensitivity cameras, and optical spectrometers. 3. Cognitive skills in the mechanics and engineering of the celestial sphere. 4. The ability to calculate sunrise and sunset times for celestial bodies, prayer times and Hijri dates according to accurate astronomical scientific calculations. 5. The ability to perform spectral analysis of stars and galaxies. 6-Explain how the observed motions of the planets led to our modern view of a Sun-centered solar system. 7-Learn about the solar system. 8-learning about Terrestrial, Celestial and Horizon Coordinate Systems. 9-Sketch the major contributions of Galileo and Kepler to the development of our understanding of the solar system. 10-State Kepler's laws of planetary motion. 11-Explain how Kepler's laws enable us to construct a scale model of the solar system, and explain the technique used to determine the actual size of the planetary orbits. 12-State Newton's laws of motion and universal gravitation and explain how they account for Kepler's laws. 13-learning about the present view of galaxies and the classification of galaxies. 14-learning about the lunar which is the natural satellite of the earth.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. Fundamentals of Astronomy is a well-balanced, comprehensive introduction to classical and modern astronomy. While emphasizing both the astronomical concepts and the underlying physical principles, the class provides a sound basis for more

	profound studies in the astronomical sciences. the students find here augmented sections on the solar system as well as a stars and galaxies. Part A - The Birth of Modern Science 1- An extensive scientific study of the development of theories of the universe and how man began to understand his place in the universe and what ideas revolved around the emergence and evolution of the universe. [15 hrs] 2- What is the solar system, what are its components, how the sun works and its composition, as well as the parts of the solar system. [15 hrs] Part B - Laws of Planetary Motion 3- Studying Kepler's three laws of planetary motion, then we will show students how Newton was able to describe - today's astronomical problem - why planets move according to Kepler's laws?. [30 hrs] 4- How we can be specified the position of an observer on the earth's surface by the terrestrial coordinates, and the position of an object in the The celestial sphere.[19 hrs] 5- The present view of galaxies galaxies and the classification of galaxies.[15 hrs] 6- Studying the characteristics of the only natural satellite of the earth, Lunar, and explaining its characteristics, as well as studying the phenomenon of eclipses.[15 hrs]

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, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	109	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	91	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6

Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200

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, 3, 4 and 5
	Assignments	2	10% (10)	2, 12	LO #5,6,7,8, 9, 10
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #10, 11, 12, and 13
Summative assessment	**Midterm Exam**	2 hr	10% (10)	10	LO # 1-13
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	The birth of modern science
Week 2	Astronomical concepts
Week 3	The solar system1
Week 4	The solar system2
Week 5	Kepler's laws of planetary motion1
Week 6	Kepler's laws of planetary motion2
Week 7	Newton's laws, Terrestrial coordinate system
Week 8	Celestial, and horizon coordinate systems1
Week 9	Celestial, and horizon coordinate systems2
Week 10	Midterm Exam
Week 11	Celestial, and horizon coordinate systems3
Week 12	The galaxies and the classification of galaxies1
Week 13	The galaxies and the classification of galaxies2

Week 14	The earth's Moon(The phases, Eclipses)1
Week 15	The earth's Moon(The phases, Eclipses)**2**
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1:
Week 2	Lab 2:
Week 3	Lab 3:
Week 4	Lab 4:
Week 5	Lab 5:
Week 6	Lab 6:
Week 7	Lab 7:

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	**Fundamental Astronomy/ H. Karttunen et al. / 2007**	Yes
Recommended Texts	**Astronomy Journey to the Cosmic Frontier 4th Edition/ John D. Fix/2006.** **An Introduction to Astrophysics / 2nd edition / 2014.**	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 DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**General Physics**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**AST1102**				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level		1	**Semester of Delivery**		1
Administering Department		Astronomy and space	**College**	College of Science	
Module Leader	Dr. Waleed Ibrahim Yaseen		**e-mail**	**waleed.yaseen@sc.uobaghdad.edu.iq**	
Module Leader's Acad. Title		Assist. Professor	**Module Leader's Qualification**		Ph.D.
Module Tutor	none		**e-mail**	E-mail	
Peer Reviewer Name		Name	**e-mail**	E-mail	
Scientific Committee Approval Date		19/06/2023	**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 develop problem solving skills and understanding of physics theories (mechanics and Electricity) through the application of techniques. 2. To understand voltage, current and power from electric law. 3. This course deals with the basic concept of Mechanics and electricity. 4. This is the basic subject for all electrical and mechanics. 5. To understand Kirchhoff's current and voltage Laws problems.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Recognize how electricity and mechanics work. 2. List the various terms associated with Physics. 3. Summarize what is meant by basic Mechanics and electricity. 4. Describe electrical power, charge, and current. **5.** Define Ohm's law. 6. Identify the essential circuit elements and their applications. 7. Discuss the operations of sinusoids and phasors in an electric circuit. 8. Discuss the various properties of resistors, capacitors, and inductors. 9. Explain the two Kirchoff's laws used in circuit analysis. 10. Identify the capacitor and inductor phasor relationship with respect to voltage and current.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <u>Part A – Mechanics Theory</u> Vectors, Units, Velocity and acceleration, Forces, Newton law, energy, work and power, projectiles, circular motion. [30 hrs] Momentum, kinetic energy, moments, Flight theory. [18 hrs] <u>Part B - Electric Theory</u> DC circuits – Current and voltage definitions, Passive sign convention and circuit elements, Combining resistive elements in series and parallel. Kirchhoff's laws and Ohm's law. Anatomy of a circuit, Network reduction. [20 hrs] AC circuits I – Time dependent signals, average and RMS values. Capacitance and inductance, energy storage elements, simple AC steady-state sinusoidal analysis. [20 hrs] AC Circuits II - Combining capacitance elements in series and parallel, AC circuit analysis with complex numbers. [10 hrs]

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.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	109	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	66	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	4.4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

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
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	**Midterm Exam**	2 hr	10% (10)	10	LO # 1-10
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	**Introduction: Units**
Week 2	**Vectors: scalar vector and unit vector**
Week 3	**Displacement, velocity and acceleration**
Week 4	**Force and Newton laws**
Week 5	**Energy, power and momentum**
Week 6	**Motion in two dimension**
Week 7	**Projectile**
Week 8	**Circular motion**
Week 9	**Introduction – charge and electric force**
Week 10	**Midterm Exam, Electric field and Gaus law**
Week 11	**Current, Electric energy and power**
Week 12	**Resistance and Resistivity, Ohm's Law**
Week 13	**AC circuit and, Capacitance**
Week 14	**Review of Inductor and Capacitor as Circuit Elements, Source-free RL and RC Circuits.**
Week 15	**Electric circuit and measurements methods**
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Simple Pendulum
Week 2	Lab 2: Equilibrium Forces
Week 3	Lab 3: The speed of sound by means of resonance tube
Week 4	Lab 4: Inclined surface
Week 5	Lab 5: Distance, Velocity and Time
Week 6	Lab 6: spiral spring
Week 7	Lab 7: linear momentum
Week 8	Lab 8: Ohm Law part 1
Week 9	Lab 9: Find the value of an unknown resistance medium value comparison with a second resistance value in manner known
Week 10	Lab 10: Non-Linear Relation between voltage different and current in hot resistance
Week 11	Lab 11: Wheatstone bridge part 1
Week 12	Lab 12: Investigate Ohm Law for AC Capacitive Circuit part 1
Week 13	Lab 13: Ohm Law part 2
Week 14	Lab 14: Investigate Ohm Law for AC Capacitive Circuit part 2
Week 15	Lab 15: Wheatstone bridge part 2

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	**Fundamentals of Physics 10th Edition by David Halliday (Author), Robert Resnick (Author), Jearl Walker (Author)**	Yes
Recommended Texts	**Projectile Motion: A Short Teaching Presentation Kamil Walczak**	**Yes**
Websites	**https://www.coursera.org/browse/physical-science-and-engineering/electrical-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

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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Differentiation and Integration**			**Module Delivery**	
Module Type	**Support**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**AST1103**				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level		1	**Semester of Delivery**		1
Administering Department		**Department of Mathematics**	**College**	**College of Science**	
Module Leader	Name		**e-mail**	E-mail	
Module Leader's Acad. Title			**Module Leader's Qualification**		Ph.D.
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name		Name	**e-mail**	E-mail	
Scientific Committee Approval Date		20/06/2023	**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 develop a good understanding of three-dimensional vectors, the geometry of space. 2. To acquire basic skills needed to apply integration techniques to solve a wide range of integration problems. 3. To develop a basic understanding of infinite series and their applications. 4. To provide students with a solid foundation in Calculus at degree level and equip them with a knowledge of the necessary methods and techniques in applied mathematics for further study. 5. It deals with the basic concept of functions limit, continuity, derivation and their consequences. 6. To develop problem solving skills and understanding of differentiation rules through the application.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. 1. To provide students with a solid foundation in Calculus at degree level and equip them with a knowledge of the necessary methods and techniques in applied mathematics for further study. 2. 2. It deals with the basic concept of functions limit, continuity, derivation and their consequences. 3. 3. To develop problem solving skills and understanding of differentiation rules through the application.. 4. Use the concepts of definite integrals to solve problems involving area, volume, work, and other physical applications. 5. Use substitution, integration by parts, trigonometric substitution, partial fractions, and tables of anti-derivatives to evaluate definite and indefinite integrals. 6. Define an improper integral and apply the concepts of limits, convergence, and divergence to evaluate some classes of improper integrals. 7. Determine convergence or divergence of sequences and series. 8. Use the concept of polar coordinates to find areas, lengths of curves, and representations of conic sections.
Indicative Contents المحتويات الإرشادية	The course will supply the students with basic concepts of differentiation (chain, product, quotient). Derivatives of standard functions (powers, polynomials, trigonometric). The exponential function: and logarithm as inverse. Derivatives of inverse functions via chain rule, local extrema and curve sketching • Integral calculus. The definite integral. Anti-derivatives and the indefinite integral. Fundamental Theorem of Calculus. Rules and techniques for integration: partial fractions, by parts, by substitution. Improper integrals. Recursion formulae, the gamma function. • Hyperbolic functions. Conic sections as polynomial equations of

	degree 2 in two variables. Relationships between trigonometric and hyperbolic functions, connections with Algebra: the complex numbers, Euler's formula. • Parametric curves. Vector-valued functions. Arc length, speed, velocity. • Functions of two variables. Surfaces as graphs, level curves. Partial derivatives: intuitive notion, statement of chain rule, examples. Directional derivatives derived from chain rule. Tangent plane as linear approximation to the surface at a point. Equality of mixed second partial derivatives, chain rule. The gradient vector: geometric interpretation, directional derivative, tangent planes. Vector fields. Implicit differentiation: of functions of one variable and of scalar fields; tangent lines to level curves. Application of chain rule to coordinate transformations. • Double integrals. Surface area, volumes of revolution. Double integral as the volume under a surface. Evaluation over rectangular regions, as iterated integrals; changing order of integration. Integrals over more general regions and in polar coordinates; the Gaussian integral as example. Change of variables in double integrals, the Jacobian.

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, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	77	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (10)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	20% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.	0	0	Continuous	All
	Report	0	0	13	LO # 5, 8 and 10
Summative assessment	Midterm Exam	2 hr	10% (10)	10	LO # 1-10
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction – Functions: Trigonometric functions
Week 2	Exponential function, inverse functions, logarithms
Week 3	Derivative: motivation, informal definition of limit
Week 4	Derivative of polynomials, product and quotient rules
Week 5	Derivatives of trigonometric functions
Week 6	Derivative of the logarithm, applications
Week 7	Introduction to integral, the definite integral
Week 8	The Fundamental Theorem of Calculus with applications
Week 9	Areas between curves
Week 10	Mid-term Exam + Discussion
Week 11	Areas in polar coordinates
Week 12	Volumes and Integration by Parts
Week 13	Trigonometric integrals
Week 14	Strategy for Integration
Week 15	Further applications: arc length and area of a surface of revolution
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر
None

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Thomas Calculus, Joel R. Hass, Maurice D. Weir, 15th edition (2022).	Yes
Recommended Texts	Differential calculus and their applications, M. Barun, 3rd edition, Applied mathematical sciences.	No
Websites	https://www.sciencebooksonline.info/mathematics.html	

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 DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Geophysics**			**Module Delivery**	
Module Type	**Support**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☒ **Seminar**	
Module Code	**AST1104**				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level	**1**		**Semester of Delivery**	1	
Administering Department	**Department of Geology**		**College**	College of Science	
Module Leader	**Dr.Osamah Saad Al-Saadi**		**e-mail**	osamah.sahib@sc.uobaghdad.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Non		**e-mail**	Non	
Peer Reviewer Name			**e-mail**	E-mail	
Scientific Committee Approval Date	17/06/2023		**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	Provide students general overview about: 1. Earth planet, 2. Earth spheres, 3. Earth physics, 4. Internal Earth layers, 5. Overview of Geophysics in general and 6. The basic physical concept of common individual Geophysical method and main applications of each interested exploration method.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Recognize how the Earth planet was formed. 2. Learn the interactive spheres of the Earth. 3. Learn about What the Earth consists of? What are the main physical properties of the Earth's layers. 4. Explain the Geophysics specialization in general. 5. Define the physical property for each common Geophysical method. 6. Identify the main application for each exploration method. 7. Discuss some real case studies of Geophysical explorations.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following.

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.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	3
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	77	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	125		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	4	20% (20)	5, ,8,10,12	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab.				
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	**Midterm Exam**	2 hr	10% (10)	10	LO # 1-10
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction – How the Earth is formed and the Earth's spheres
Week 2	Internal Earth-layers and their physical properties, how the scientists identified these layers
Week 3	Plate tectonic of the Earth crust
Week 4	Main Rock-types of the Earth crust and Rock Cycle
Week 5	Overview of main specialization of Earth-sciences
Week 6	Discussion and review for the previous topics
Week 7	Overview of Geophysics and physical properties of each geophysical method
Week 8	Overview of the Gravity geophysical method
Week 9	Basic physical concept and main application of the method in Earth exploration

Week 10	Mid-term first Exam
Week 11	Overview of the Magnetic Geophysical method
Week 12	Basic physical concept and main application of the method in Earth exploration
Week 13	Overview of the Electrical resistivity Geophysical method
Week 14	Basic physical concept and main application of the method in Earth exploration
Week 15	End-term second Exam
Week 16	**Discussion and Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1:
Week 2	Lab 2:
Week 3	Lab 3:
Week 4	Lab 4:
Week 5	Lab 5:
Week 6	Lab 6:
Week 7	Lab 7:

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	**Books:** *Applied Geophysics,* Telford, Geldhart, Sheriff and Keys, Cambridge University Press *Fundamentals of Geophysics*, William Lowrie 2007, 2nd Ed., Cambridge University Press. *An Introduction to Applied and Environmental Geophysics*, Reynolds 2011, 2nd Ed., Wiley-Blackwell	No
Recommended Texts	Physical Geology (15th ed.) [Plummer, Carlson, Hammersley, 2016] Understanding Earth (7th ed.) [J. Grotzinger, T. H. Jordan, 2014] Essentials of Geology (4th Ed.) [Stephen Marshak, 2013]	No
Websites	https://geologyscience.com/geology-branches/geophysical-methods/	

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 DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**English Language**			**Module Delivery**	
Module Type	**Basic**			☒**Theory** ☒**Lecture** ☐**Tutorial** ☐**Practical** ☐**Seminar**	
Module Code	**UoB1105**				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level		1	**Semester of Delivery**		1
Administering Department		Type Dept. Code	**College**	Type College Code	
Module Leader	Dr. Muthana Hameed Khalaf		**e-mail**	muthana.khalaf@sc.uobaghdad.edu.iq	
Module Leader's Acad. Title		Assistant Professor	**Module Leader's Qualification**		Ph.D.
Module Tutor	Non		**e-mail**		
Peer Reviewer Name		Name	**e-mail**	E-mail	
Scientific Committee Approval Date		01/06/2023	**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	New Headway Beginner Plus is a Beginner course in English intended to provide students with the fundamentals of the language and a foundation at First Year students / college of science, moving towards a higher level of proficiency at this stage. 1. Listening Objectives: • Understand and respond to basic greetings, introductions, and simple instructions. • Comprehend and extract information from short, simple spoken passages related to everyday topics. • Identify and understand common vocabulary and expressions in spoken English. 2. Speaking Objectives: • Engage in basic conversations using simple greetings, introductions, and expressions related to personal information. • Ask and answer simple questions about personal details, daily routines, and familiar topics. • Participate in short dialogues and role-plays to practice communication skills. 3. Reading Objectives: • Read and comprehend simple texts, such as signs, labels, short passages, and dialogues. • Recognize and understand basic vocabulary words and phrases in context. • Extract information from texts related to everyday situations and topics. 4. Writing Objectives: • Write short sentences and paragraphs about personal information, experiences, and familiar topics. • Fill out basic forms with personal details, such as name, age, and nationality. • Write simple messages, notes, and emails related to everyday situations. 5. Vocabulary and Grammar Objectives: • Acquire a basic vocabulary related to common topics, such as greetings, numbers, time, family, food, and everyday objects. • Understand and use basic grammatical structures, including present simple, present continuous, simple past, and basic question forms. • Recognize and use common prepositions, articles, and basic sentence structures. 6. Cultural Awareness Objectives: • Develop an understanding of cultural customs and practices related to greetings, social norms, and everyday interactions in English-speaking countries. • Gain exposure to cultural elements through reading or listening to texts about customs, traditions, and holidays.
Module Learning Outcomes	By the end of the course, the students will be able to: 1. Listening and Speaking Skills:

مخرجات التعلم للمادة الدراسية	• Understand and respond appropriately to basic questions and statements. • Engage in simple conversations related to personal information, daily routines, and immediate surroundings. • Follow simple instructions and directions. • Develop basic pronunciation and intonation skills. 2. Reading Skills: • Recognize and understand basic vocabulary words and phrases in simple texts. • Comprehend and extract information from short, simple texts such as signs, notices, and labels. • Understand basic sentence structures and common grammatical patterns. 3. Writing Skills: • Write simple sentences and short paragraphs about personal information, experiences, and familiar topics. • Fill out simple forms and write basic personal information. • Write simple messages, notes, and emails related to everyday situations. 4. Vocabulary and Grammar: • Acquire and use a basic range of vocabulary related to everyday topics, such as greetings, numbers, time, family, food, and common objects. • Understand and use basic grammatical structures, including present simple, present continuous, simple past, and basic question forms. • Recognize and use common prepositions, articles, and basic sentence structures. 5. Cultural Awareness: • Develop an understanding of cultural customs and practices related to greetings, social norms, and everyday interactions in English-speaking countries. • Gain exposure to cultural elements through reading or listening to texts about customs, traditions, and holidays.
Indicative Contents المحتويات الإرشادية	1. Use simple forms of polite expressions to establish basic social contact and to perform everyday functions including making requests and offers, conducting simple phone conversations, asking and telling time, giving simple directions, asking about price, ordering a meal, etc. 2. Use a narrow range of positive and negative adjectives to describe objects, people and places. 2.3. Exchange information by forming and responding to simple questions. 3. Produce simple sentences using the correct word order and punctuation marks. 4. Use capital and lower case letters accurately in writing. 5. Construct a short guided paragraph on a familiar topic concerning home, family, friends and holidays. 5. Use the basic tenses including the present and past simple, and present continuous correctly.

	6. Use the basic auxiliary verbs (am/is/are/was/were/can) and a range of regular and irregular verbs. 7. Demonstrate awareness of the essential grammatical features and functions including questions and negatives, plural nouns, frequency adverbs, possessives, pronouns and determiners.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1.Communicative Approach: Emphasize communicative activities that promote interaction among students. Encourage pair and group work, role-plays, and discussions to practice language skills in meaningful contexts. 2.Integrated Skills: Integrate the four language skills (speaking, listening, reading, and writing) in lessons to create a balanced approach to language learning. Provide opportunities for students to use and develop these skills simultaneously. 3.Vocabulary Expansion: Incorporate vocabulary-building exercises and activities throughout the course. Use real-life contexts, visuals, and practical examples to help students learn and remember new words. 4.Grammar Focus: Teach and reinforce grammar structures in a systematic and progressive manner. Provide clear explanations, examples, and practice exercises to ensure students understand and can apply the grammar rules correctly. 5.Authentic Materials: Include authentic texts, such as articles, newspaper clippings, songs, and videos, to expose students to real-world language usage. This helps develop their reading and listening comprehension skills and exposes them to cultural aspects of English-speaking countries. 6.Cultural Awareness: Integrate cultural topics and discussions into the lessons to foster cultural awareness and sensitivity. Encourage students to share their own cultural backgrounds and experiences to promote understanding and appreciation of diverse perspectives. 7.Error Correction: Provide constructive feedback and error correction during speaking and writing activities. Help students identify and correct their mistakes, focusing on accuracy while encouraging fluency and self-expression. 8.Technology Integration: Utilize technology tools, such as interactive whiteboards, online resources, and language learning apps, to engage students and enhance their language learning experience. Incorporate multimedia materials for listening and speaking practice. 9.Regular Assessment: Assess students' progress regularly through quizzes, tests, and assignments. Provide timely feedback to guide their learning and address areas that need improvement.

	10.Individualization: Cater to the individual needs and learning styles of students. Offer differentiated tasks and activities to ensure all learners are appropriately challenged and supported. 11.Cooperative Learning: Promote collaboration and teamwork among students through pair work, group projects, and peer feedback. This encourages active participation and a supportive learning environment. 12.Review and Revision: Schedule regular review sessions to consolidate previously learned material. Encourage students to revise and practice independently, providing resources for self-study and additional practice.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.25
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**50**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	4	20% (20)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects				
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	10	LO #1 - #10
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Hello! p6 ***am/are/is, my/your*** *I'm Pablo.* *My name's Judy.* *What's your name?* p6 ***This is ...*** *This is Ben.* *Nice to meet you.* p7
Week 2	Your world p12***he/she/they, his/her*** *He's from the United States.* *Her name's Karima.* p13 *They're on holiday.* p16 Questions *What's his name?* *Where's she from?* p13
Week 3	All about you p18 ***am/are/is*** *We're all singers.* p20 Negatives *She isn't a nurse.* p18 *I'm not from Scotland.* p20 *They aren't builders.* p20 Questions *What's her address? How old is she?* *Is she married?* p19 Short answers *Yes, she is. / No, she isn't.* p20
Week 4	Family and friends p24 **Possessive adjectives** *my, your, our, their* p24 **Possessive *'s*** *Annie's husband Jim's office* p24 ***has/have*** *I have a small hotel. She has a job.* *We have three sons.* p27 **Adjective + noun** *a small hotel a big house a good job* p27*apples, beer, bread, cake* p36 **Shopping** *newsagent's, chemist's,* *off-licence* p36 **Can you come for dinner?** *Would you like some* *more rice?* *Could you pass the*

	salt, please? *How would you like* *your coffee?* *This is delicious!* p37
Week 5	# The way I live p32 **Present Simple *I/you/we/they*** *I like ice-cream. I don't like tennis.* *Do you like football?* p33 *Where do you work? Do you live in Dundee?* p34 *In Brazil they speak Portuguese.* p36 ***a* and *an*** *a waiter, an actor, an Italian restaurant* p34 **Adjective + noun** *an American car Spanish oranges* p37
Week 6	# Every day p40 **Present Simple *he/she*** *He gets up at 6.00.* *He has lunch in his office.* p42 *She lives in a small house.* p44 Questions and negatives *What time does he have breakfast?* *He doesn't live in London.* p43 **Adverbs of frequency** *He always works late.* *He never goes out.* p42
Week 7	# My favourites p48 **Question words** *who, where, why, how* p48 **Pronouns** Subject/Object/Possessive *I/me/my we/us/our they/them/ their* p49 ***this* and *that*** *I like this wine. Who's that?* p50
Week 8	# Where I live p56 ***There is/are ...*** *There's an old sofa.* *Are there any armchairs?* *There are some books.* p57 **Prepositions** *in, on, under, next to* p58
Week 9	# Times past p64 ***was/were born*** *When were you born?* *I was born in 1996.* p65 **Past Simple – irregular verbs**

	went, came, saw *She went shopping.* p68
Week 10	Mid-term Exam
Week 11	# We had a great time! p72 **Past Simple – regular and irregular** *played, got, watched, did* p72 Questions *What did you do?* *Did you go out?* p73 Negatives *They didn't go to work.* p73 ***ago*** *I went to Rome ten years ago.* p78
Week 12	# I can do that! p80 ***can/can't*** *He can speak French. I can't draw.* *Can she run fast?* p80 **Adverbs** *I can cook a little bit. I can't cook at all.* *really well, fluently* p82 **Requests and offers** *Can you tell me the time? Can I help you?* p83
Week 13	# Please and thank you p88 ***I'd like ...*** *I'd like some ham.* *How much would you like?* p88 ***some* and *any*** *I'd like some cheese.* *Do you have any Emmental?* *I don't have any apple juice.* p89 ***like* and *would like*** *I like Coke.* *I like going to the cinema.* *I'd like to go out.* p91
Week 14	# Here and now p96 **Present Continuous** *She's wearing a T-shirt.* *What's he doing?* p97 **Present Simple and Present Continuous** *He lives in London.* *They're staying in a hotel.* p98
Week 15	# It's time to go!

	p104 **Future plans** *They're going on holiday.* *Which countries are you going to visit?* *I'm leaving on Tuesday.* *What are you doing this evening?* p104 **Revision** Question words – *when, where, who, how* p106 Tenses – present, past, and future tenses p110
Week 16	**Preparatory week before the final Exam**

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Soars, John and Liz, (2011), New Headway Plus, Special Edition, Beginner Level, Oxford University Press.	Yes
Recommended Texts	New Headway Plus provides an integrated skills course with each unit divided into grammar, vocabulary, skills work and everyday English segments	yes
Websites	Oxford University Press: The New Headway series is published by Oxford University Press. Visit their website at www.oup.com and search for "New Headway Plus, Special Edition, Beginner Level " or browse their English language teaching section for information on the course.	

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 DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Computer Skills I**			**Module Delivery**	
Module Type	Support			☐ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code					
ECTS Credits	3				
SWL (hr/sem)	75				
Module Level	1		**Semester of Delivery**		
Administering Department	Computer Science		**College**	College of Science	
Module Leader	Mela Ghazi Abdul-Haleem		**e-mail**	a.mela@sc.uobaghdad.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	M.Sc	
Module Tutor			**e-mail**		
Peer Reviewer Name	Dr. Assmaa A. Fahad		**e-mail**	Assmaa.fahad@sc.uobaghdad.edu.iq	
Scientific Committee Approval Date	11-6-2023		**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	• This module sets out essential concepts and skills relating to the use of devices. • This module covers the key skills and main concepts relating to computers, devices, file creation and management, web browsing, and data security. • Help students to demonstrate the ability to use word processing

	application to accomplish everyday tasks associated with creating, formatting, finishing small-sized word processing documents, such as letters and other everyday documents. • Help students to demonstrate the ability to use a power point application to accomplish tasks associated with creating, and formatting a presentation. • Help students to demonstrate the ability to use Excel application to accomplish a spreadsheet for tasks.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	Upon successful completion of the course, a student will be able to: 1. Understand key concepts relating to computers, devices and software. 2. Identify the main types of Integrated and External equipment 3. Understand concepts of online communities, communications and e-mail 4. Adjust the main operating system settings and use built-in help features. 5. Know about the main concepts of file management and be able to efficiently organize files and folders. 6. Create a report by Ms. Word document and print an output. 7. Use University email to Collaborate inside and outside university and How to participate in video conference using meet 8. Create a presentation using power point application. 9. Create a spreadsheet using Excel application.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following: - The general purpose computer model: All types of computers follow the same structure and perform the basic operations (Input, Processing, Output, Storage and controlling) to converting raw input (data) to information. - Components of a computer Hardware: Each computer consists of Hardware and software. The Hardware includes input devices, output devices, system units, storage devices, and communication devices. - System Units (Internal & External components of system units): The internal component of the system units is consists of (CPU, Motherboard, RAM, Ports, Hard disk …). - Central Processing Unit: ALU, CU, and memory unit. - Memory and its Types ▪ Cache Memory ▪ Primary memory –Comparison between RAM & ROM ▪ Secondary Storage - Ports and their types (Ports: is a connection points used as an interface between the computer and its peripheral devices (Serial ports, Parallel ports, PS/2, USB, VGA …)). - Input Devices (Keyboard, Mouse, …) - Output Devices (Printer, speaker, monitors, …) - Software Types of Software ▪ Operating System (Windows, Linux, …) ▪ Application Software & their types ▪ Programming Languages (Low, Assembly, High level). - Internet, Benefits, Browsing the Web (Web Browser) , Search the web (search

	engine) - Communication Technology: It plays an important role in almost every activity that we performed. The best examples of Communication technology includes: blogs, Web sites, live video, social media technology, and E-mail communication. - E-mail: free e-mail providers (G-mail, Yahoo-mail, …), send and receive E-mail operation, send e-mail with attachment, checking the e-mail boxes (inbox, send box, spam …). - Security and keeping information safe: protect the information from unauthorized access and prevent use, modification, and destruction of this information. - Virus transmission ways to the computer: by e-mail, Downloading from the Internet, Pirated software, Exchange of diskettes, in attached e-mail, and in documents. - Protection against viruses: install good anti-viruses. - Antivirus, benefits and Types Introduction to windows - Desktop Components: (Icons, Start, task bar …) - The start menu (its functions and properties) …

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. Different forms of teaching will be used to reach the objective of this module, including power point presentation for the subjects which contains titles, definitions, summary and conclusions, whiteboard will be used and classroom discussion with assignments, the students will be asked to prepare papers on selective topics.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	62	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	13	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**75**		

Module Evaluation
تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	**Quizzes**	2	10	6 and 10	(1), (2), (3), (4), (5), (8), (9)
	Assignments	2	10	11 and 13	
	Projects / Lab.	1	10	Continuous	All
	Report	1	10	10	
Summative assessment	**Midterm Exam**	2hr	10	13	
	Final Exam	3hr	50	16	All
Total assessment			100 Marks		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي

	Material Covered
Week 1	Introduction to Computers – definition -The purposes of using a computer. -The general purpose computer model. -The difference between Data and Information concepts. Introduction to windows - Desktop Components - The start menu (its functions and properties)
Week 2	The Components of a computer: Hardware - System Units (Internal & External components of system units) - Central Processing Unit (Features and components) Windows: - Task bar and its functions and properties
Week 3	- Memory and its Types ▪ Cache Memory ▪ Primary memory –Comparison between RAM & ROM ▪ Secondary Storage Windows: - Files and Folders: All operations on files and folders (selection, creation, saving, moving and renaming.
Week 4	Ports and their types - Input Devices, - Output Devices Windows: - Delete Files. - Recycle bin. - Creating a Shortcut. - Desktop Icons. - The Windows Explorer Views. - Sort files.

Week 5	- Software Types of Software ▪ Operating System ▪ Application Software & their types Programming Languages Windows: -Customizing the desktop. -Change screen resolution. - Change Desktop Background
Week 6	- Communication Technology - E-mail Windows: - Print Screen - Cleaning Up the Disk - Defragmenting the Disk **Quiz (1, 2, 3, 4, 5) -Windows only**
Week 7	- Internet, Browsing the Web (Web Browser) , Search the web (search engine) - Security and keeping information safe -Virus transmission ways to the computer -Protection against viruses -Antivirus, benefits and Types
Week 8	Microsoft Word - Word Program Interface -Keyboard Shortcuts in Microsoft Word -The operations on Text - File Menu
Week 9	Microsoft Word - Home Tab & it commands - Insert Tab (Pages & tables Groups) - Table Tools
Week 10	Microsoft Word - Insert Tab (Illustrations, Header & Footer, Text and Symbols Groups) - Page Layout, References, Review Tabs **Quiz (Week 8, 9)**
Week 11	Microsoft PowerPoint - PowerPoint program Interface. - File Menu - Home Tab & it commands - Operations on the Slides (duplicate, Delete, and Move)
Week 12	Microsoft PowerPoint - Insert Tab, Design Tab, Slide Show Tab and their commands - Transitions, and Animations Tabs
Week 13	Microsoft Excel - File Menu, Home Tab & it commands
Week 14	Microsoft Excel - Excel Worksheet Basics - Cell format
Week 15	**Preparatory Week**
Week 16	**Final Exam**

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1. M. E. Vermaat and G. B. Shelly, *Discovering Computers Fundamentals: Living in a Digital World,* Shelly Cashman, 2011 Edition. 2. J. Lambert, J. Cox , and C. Frye, *Microsoft Office Professional 2010 Step by Step* , 1'st Edition, Microsoft Press, 2010, 152P.	E-Copy
Recommended Texts	D. Hajek and C. Herrera***, Introduction to Computers 2022 Edition,*** Independently published, May 19, 2022, 255P.	NO
Websites	1. https://theictbook.com/components-of-the-system-unit-and-their-functions/ 2. https://www.tutorialspoint.com/computer_fundamentals/index.htm 3. https://www.slideshare.net/Jamjolojessa/types-of-application-software?from_action=sav 4. https://www.bbc.co.uk/bitesize/guides/zbfny4j/revision/1 5. https://generalnote.com/Computer-Fundamental/ 6. https://edu.gcfglobal.org/en/word2010/# 7. https://edu.gcfglobal.org/en/powerpoint2010/# 8. https://edu.gcfglobal.org/en/excel2010/# 9. https://antivirus.comodo.com/blog/computer-safety/what-is-antivirus 10. https://thingscouplesdo.com/what-is-the-antivirus-software-that-is-best-for-a-user	

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 DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Astrophysics**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☒ **Tutorial** ☐ **Practical** ☒ **Seminar**	
Module Code	**AST1207**				
ECTS Credits	**8**				
SWL (hr/sem)	**200**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	**Department of Astronomy and Space**		**College**	**College of Science**	
Module Leader	**Dr. Abdullah K Ahmed**		**e-mail**	**abdullah.ahmed@sc.uobaghdad.edu.iq**	
Module Leader's Acad. Title	**Assist.Prof**		**Module Leader's Qualification**	**Ph.D.**	
Module Tutor	**Hayder R Hussain**		**e-mail**	**hayder.hussein1107@sc.uobaghdad.edu.iq**	
Peer Reviewer Name	**Dr. Duraid A Mohammed**		**e-mail**	**duraid.mohammed@sc.uobaghdad.edu.iq**	
Scientific Committee Approval Date	**19/06/2023**		**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	Non	**Semester**	
Co-requisites module	Non	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Aims أهداف المادة الدراسية	1. This module provides an Astrophysics and the study of the nature and physics of stars and star systems. It provides the theoretical framework for understanding astronomical observations. 2. At times astrophysics can be used to predict phenomena before they have even been observed by astronomers, such as black holes. The laboratory of outer space makes it possible to investigate large-scale physical processes that cannot be duplicated in a terrestrial laboratory. 3. This module provides an introduction to Astronomy and the foundations for Astrophysics courses in second semester 4. This module will introduce some of the fundamental principles which underpin modern astronomy and astrophysics. The module will begin by introducing some of the most exciting challenges facing modern astronomers today. The module will examine how astronomy developed from philosophy into a modern science, with particular reference to the scientific method. This discussion will lead to the introduction of the key concepts of optics on which optical telescopes rely. The module will conclude by discussing the nature of light and its uses
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. The students can have the ability to bring about one of the greatest scientific achievements ever a unified understanding of the total evolutionary scheme of the universe. 2. Theoretical and practical scientific expertise and skills related to astrophysics, and the ability to know the Appropriate radiation laws. 3. Skills and abilities in operating and using scientific instruments, ground-based optical and radio telescopes, high-sensitivity cameras, and optical spectrometers. 4. The ability to perform spectral analysis of stars and galaxies. 5. Explain how the observed motions of the planets led to our modern view of a Sun-centered solar system. 6. Learn about the solar system.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. Astrophysics is a well-balanced, comprehensive introduction to classical and modern astronomy. While emphasizing both the astronomical concepts and the underlying physical principles, the class provides a sound basis for more profound studies in the astronomical sciences. the students find here augmented sections on the solar system as well as a stars and galaxies.

	Part A - Astrophysics Definition 1- can be defined as the study of the nature and physics of stars and star systems. It provides the theoretical framework for understanding astronomical observations. [15 hrs] 2- Studying the blackbody which is a theoretical idea that closely approximates many real objects in thermodynamic equilibrium and the radiation laws. [15 hrs] Part B - The Appropriate Radiation Laws 3- . Star magnitudes, brightness, luminosity and absolute magnitude. The relation between magnitudes, temperature, mass of stars and luminosity [30 hrs] 4- Stellar evolution and the description of the way that stars change with time.[19 hrs] 5- The motion of stars and spectra of stars.[15 hrs] 6- H-R diagram, Binary stars, Interstellar matter and Planetary nebulae and white dwarfs.[15 hrs]

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, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	109	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	7
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	91	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200		

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, 3, 4 and 6
	Assignments	2	10% (10)	2, 12	LO #5,6,
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, 6
Summative assessment	Midterm Exam	2 hr	10% (10)	10	LO # 1-6
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)
المنهاج الاسبوعي النظري

	Material Covered
Week 1	Astrophysics definition
Week 2	The appropriate of radiation laws
Week 3	Star magnitudes
Week 4	The relation between magnitudes, temperature, mass of stars and luminosity
Week 5	Stellar evolution
Week 6	The motion of stars
Week 7	Spectra of stars
Week 8	Star (formation, luminosity and temperature)1
Week 9	Star (formation, luminosity and temperature)2
Week 10	Midterm Exam
Week 11	H-R diagram
Week 12	Binary stars
Week 13	Interstellar matter
Week 14	Planetary nebulae and white dwarfs
Week 15	Doppler effect
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1:
Week 2	Lab 2:
Week 3	Lab 3:
Week 4	Lab 4:
Week 5	Lab 5:
Week 6	Lab 6:
Week 7	Lab 7:

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	**Fundamental Astronomy/ H. Karttunen et al. / 2007**	Yes
Recommended Texts	**Astronomy Journey to the Cosmic Frontier 4th Edition/ John D. Fix/2006.** **An Introduction to Astrophysics / 2nd edition / 2014.**	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 DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Atmospheric Sciences**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☒ **Seminar**	
Module Code	**AST1208**				
ECTS Credits	**8**				
SWL (hr/sem)	**200**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Astronomy and Space		**College**	College of Science	
Module Leader	Dr. Yasser Chasib Bakheet		**e-mail**	yasser.bakheet@sc.uobaghdad.edu.iq	
Module Leader's Acad. Title	lecture		**Module Leader's Qualification**	Ph.D.	
Module Tutor	none		**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date	18/06/2023		**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. The purpose of the Atmospheric Sciences course is to study the Earth's atmosphere. This specialty includes weather forecasting and the dynamic, physical, and chemical processes that control wind, clouds, and storms. The study of atmospheric science provides an opportunity to investigate the forces that shape weather and climate and the ways in which human activities can affect weather and climate by introducing pollutants into the atmosphere. 2. To produce graduates who possess quantitative, scientific reasoning skills that can be applied to atmospheric problems. 3. To produce graduates who have a general knowledge of a range of atmospheric phenomena and applications, and have expertise in one or more program sub-disciplines or related interdisciplinary areas. 4. To produce graduates who are equipped to contribute to solving problems in the atmospheric sciences and related disciplines, through service in business or as educators, researchers, and leaders in academia, government, the private sector, and civil society.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Graduates can demonstrate skills for interpreting and applying atmospheric observations. 2. Graduates can demonstrate knowledge of the atmosphere and its evolution. 3. Graduates can demonstrate knowledge of the role of water in the atmosphere. 4. Graduates can demonstrate facility with computer applications to atmospheric problems. 5. Graduates can demonstrate skills for communicating their technical knowledge. 6. Graduates can demonstrate knowledge of the composition and structure of the atmosphere. 7. Graduates can demonstrate skills for interpreting and analyzing atmospheric humidity. 8. Graduates can demonstrate facility with computer applications to draw global temperature distributions. 9. Graduates can demonstrate knowledge of cloud formation, cloud classification, and cloud types. 10. Graduates can demonstrate skills in explaining and interpreting atmospheric chemistry. 11. Graduates can demonstrate good skills in the interpretation of global warming. 12. Graduates can demonstrate good skills in interpreting types of precipitation, measuring precipitation, and determining air pressure.
Indicative Contents المحتويات الإرشادية	**Part (A)** Origin, Composition, and Structure of the Atmosphere - General Introduction, Terms and Definitions, Formation of the Earth atmosphere, The Evolution of the Atmosphere, The Composition and Structure of the Atmosphere, Thickness of the Atmosphere, Height and Structure of the Atmosphere (Layers of the Atmosphere). Solar and Terrestrial Radiation - General Introduction, Earth-Sun Geometry, Energy, Heat and Temperature, Characteristics of Radiation, Solar Radiation, Terrestrial Radiation, Atmospheric Influences on Insolation. [12 hrs]

	Temperature - General Introduction, Controls of Temperature, Global Temperature Distribution, Temperature Cycles, Useful Temperature Indices, Measurements of Temperature. Humidity - Basic principles, Circulation of Water in the Atmosphere, Sensors, Absolute Humidity, Specific Humidity and Mixing Ratio, Measuring Humidity. [12 hrs] Stability - Adiabatic Cooling and Heating, Cloud Formation, Lifting Processes, Atmospheric Stability. Clouds and Fog - Formation of Clouds, Cloud Classification, Cloud Types, Fog, Dew and Frost. [12 hrs] Precipitation - General Introduction, Warm Cloud Process, Cold Cloud Process, Types of Precipitation, Measuring Precipitation, Weather Modification. Air Pressure - The Air Pressure, Standard Sea-Level Pressure, Barometers, Pressure Maps, Relation of Pressure with Density and Temperature. [12 hrs] **Part (B)** Wind - About Wind, Forces and Motion, What Causes Wind? Geostrophic Balance, Curved Flow (The Gradient Wind), Upper Air Charts, Troughs and Ridges, Surface Winds and the Role of Friction. Atmospheric Chemistry, Global Warming – (The Atmospheric Greenhouse Effect). Atmospheric Optics, Atmospheric Remote Sensing [30 hrs]

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, interactive tutorials and by considering type of simple experiments involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	94	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	6
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	106	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	7
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200		

Module Evaluation

تقييم المادة الدراسية

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

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Origin, Composition, and Structure of the Atmosphere
Week 2	Origin, Composition, and Structure of the Atmosphere (continued)
Week 3	Solar and Terrestrial Radiation
Week 4	Solar and Terrestrial Radiation (continued)
Week 5	Temperature
Week 6	Atmospheric Humidity
Week 7	Atmospheric Stability
Week 8	Condensation: Dew, Fog, and Clouds
Week 9	Precipitation
Week 10	Mid-term Exam + Air Pressure
Week 11	Wind
Week 12	Atmospheric Chemistry
Week 13	Global Warming – (The Atmospheric Greenhouse Effect)
Week 14	Atmospheric Optics
Week 15	Atmospheric Remote Sensing
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1:
Week 2	Lab 2:
Week 3	Lab 3:
Week 4	Lab 4:
Week 5	Lab 5:
Week 6	Lab 6:
Week 7	Lab 7:

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Understanding Weather and Climate. 7th Edition, 2015: by E. Aguado and J. E. Burt, Pearson Education, Inc. 612 page.	No **"Available on the internet"**
Recommended Texts	Meteorology Today, 10th Edition, 2013: by C. Donald Ahrens, Brooks/Cole, Cengage Learning, 640 page.	No **"Available on the internet"**

	The Atmosphere: An Introduction to Meteorology. 11th Edition, 2010, by F. K. Lutgens and E. J. Tarbuck, Pearson Education, Inc. 528 page	No **"Available on the internet"**
Websites	https://www.aslionline.org/wp/resources/atmospheric-science-resources/	

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Applied Mathematics**			**Module Delivery**	
Module Type	**Support**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☒ **Seminar**	
Module Code	**AST1209**				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level		1	**Semester of Delivery**		2
Administering Department		Department of Astronomy and Space	**College**	College of Science	
Module Leader	Dr. Hareth Saad Mahdi		**e-mail**	hareth@uobaghdad.edu.iq	
Module Leader's Acad. Title		Lecturer	**Module Leader's Qualification**		Ph.D.
Module Tutor	Non		**e-mail**	Non	
Peer Reviewer Name			**e-mail**		
Scientific Committee Approval Date		18/06/2023	**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. This course aims to introduce the fundamental applications of mathematical tools. 2. To develop problem solving skills and understand the role of applied mathematics in different fields. 3. To understand basic mathematical concepts and how to use them to solve physical problems. 4. To understand the applications of vectors and matrices. 5. To solve problems involving differentiation and integration. 6. To perform and understand the role of curve fitting.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Explain the fundamentals of algebra and geometry. 2. Explain the principles and key properties of functions and graphs and solve problems. 3. Explain the skills required for solving problems that involve differentiation and integration. 4. Explain the properties of vectors and the analysis skills required for dealing with vectors. 5. Describe the main applications of vector such as force equilibrium and projectile motion. 6. Define the properties of matrices and solve problems with mathematical operations of matrices. 7. Explain the key aspects of probability and its applications along with problems solving. 8. Explain the skills of curve fitting.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <u>Part I</u> The first part of this module focuses on the following topics: - Algebra and Geometry - Functions and Graphs - Differentiation and Integration <u>Part II</u> The second part of this module focuses on the following topics: - Vectors - Matrices - Probability - Random Variables - Fitting Curves to Data

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The main strategy that will be adopted in delivering this module is to encourage students for gaining the experience and skills required for solving problems along with their participation in the exercises, especially those that have mathematical applications. This will be achieved through classes, solving exercises and by explaining the relevant mathematical applications in our everyday life.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	87	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	4	20% (20)	3, 10	LO #1, 2, 8 and 9
	Assignments	2	10% (10)	5, 13	LO # 3, 4, 11 and 12
	Report	1	10% (10)	13	LO # 8, 9 and 10
Summative assessment	**Midterm Exam**	2 hr	10% (10)	10	LO # 1-10
	Final Exam	3hr	50% (60)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Algebra and Geometry (Part I) Elementary notations, Fractions, Modulus, Inequalities, surds
Week 2	Algebra and Geometry (Part II) Quadratic equations, Factorial, Permutation, Combination, Geometry (circles)
Week 3	Functions and Graphs (Part I) The basic functions and curves, Function properties, Straight lines, Quadratics, Polynomials
Week 4	Functions and Graphs (Part II) Hyperbola, Exponential and logarithm functions, trigonometric functions, circles and ellipses
Week 5	Differentiation First principles, Simple Derivatives, Product rule, Chain rule, Implicit Differentiation, Parametric differentiation, Second derivatives, Stationary points
Week 6	Integration Simple integrals, The definite integrals, Areas, Integration by substitution, Integration by parts
Week 7	Vectors Analysis of vectors
Week 8	Force equilibrium projectile motion
Week 9	Dot and cross product, Differentiation of vectors, Gradient, Divergence, and Curl
Week 10	Mid-term Exam
Week 11	Matrices (Part I) Definition, Equality, and Rank, Matrix Multiplication, Inner Product, Multiplication (by a Scalar), Matrix Addition
Week 12	Matrices (Part I) Diagonal Matrices, Trace, Matrix Inversion, Determinants
Week 13	Probability (Definitions, Simple Properties), Conditional Probability, Counting of Permutations and Combinations
Week 14	Random Variables Discrete Random Variable, Continuous Random Variable, Mean, variance and standard Deviation
Week 15	Fitting Curves to Data , Straight Line Fit to Data Points
Week 16	**Preparatory week before the final Exam**

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Essential Mathematical Skills for Engineering, Science and Applied Mathematics, Steven Ian Barry and Stephen Alan Davis, UNSW Press	E-Copy
Recommended Texts	Applied Mathematics for Science and Engineering, Larry A. Glasgow, Wiley	E-Copy
Websites	NA	

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
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	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 DESCRIPTION FORM
نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**General Chemistry**			**Module Delivery**	
Module Type	**Support**			☒**Theory** ☒**Lecture** ☒**Lab** ☐**Tutorial** ☐**Practical** ☐**Seminar**	
Module Code	**CoS12010**				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Department of Chemistry		**College**	College of Science	
Module Leader	Dr. Raed F. Hassan Dr.Shurooq Badri Al-badri		**e-mail**	raed.f@sc.uobaghdad.edu.iq s.b.albadr@sc.uobaghdad.edu.iq	
Module Leader's Acad. Title	Assist. Prof.		**Module Leader's Qualification**	Ph.D.	
Module Tutor			**e-mail**		
Peer Reviewer Name			**e-mail**		
Scientific Committee ApprovalDate	20/06/2023		Version Number	1	

Relation with other Modules العلاقة مع المواد الدراسية الاخرى			
Prerequisite module	Non	**Semester**	
Co-requisites module	Non	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الارشادية	
Module Objectives أهداف المادة االدراسية	1. Provide students with a comprehensive understanding of the fundamental principles underlying volumetric analysis and quantitative analysis methods. As well as general knowledge in bath Organic Chemistry and Biochemistry. 2. Develop specialists in the field of general chemistry and its practical applications, preparing them to fulfill the country's developmental and industrial needs. 3. Foster a scientifically literate generation that recognizes the value of science as a catalyst for transformative change. This includes cultivating critical thinking skills, promoting analytical thinking, and facilitating adaptability to evolving technologies and societal demands. 4. Strengthen the connection between the university and society by offering advisory counseling, training programs, and professional development opportunities for faculty and staff, ensuring that academic knowledge is effectively applied to real-world contexts. 5. Contribute to the country's overall progress by producing chemistry graduates who possess the skills and knowledge to actively contribute to its development. 6. Address the increasing demand for highly qualified professionals in various sectors that require specialized expertise in chemistry. 7. Encourage exceptional students to serve as teaching assistants within the department, nurturing their potential to become future members of the academic teaching staff and fostering the growth of a knowledgeable and skilled workforce
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	A. Cognitive goals 1- Introduce students to the fundamental principles of volumetric analysis and quantitative analysis methods, establishing a solid foundation in the field. 2- Foster an understanding of the theoretical principles and practical applications of titration, enabling students to detect both inorganic and organic compounds effectively. 3- Provide students with a comprehensive knowledge of volumetric analysis, with a specific focus on titration, and its extensive range of applications in various scientific disciplines. 4- Provide students knowledge of definition of organic chemistry, the classification of organic compounds, how to distinguish between them, and a method. As well as how given the name to organic compound. 5- Provide students' knowledge of biochemistry, the basic elements of life, and the structure and components of a cell.as well as the types of carbohydrates, fats, proteins and nucleic acids. A. The skills goals special to the program 1- Enhance students' research skills by encouraging them to engage in scientific exploration and facilitating constructive discussions where informed opinions are shared. 2- Develop proficiency in the use and development of laboratory techniques and equipment, enabling students to conduct experiments effectively and obtain accurate results. 3- Cultivate critical thinking skills that allow students to analyze and solve scientific problems related to the laws of chemistry, promoting a deeper understanding of the subject. 4- Foster the development of practical skills and the ability to apply theoretical and empirical scientific knowledge gained through their studies in real-life situations, taking into account industrial and commercial constraints.

Indicative Contents المحتويات الارشادية	The course aims to provide students with a comprehensive understanding of classical titration methods in analytical chemistry. It covers the fundamental principles of acid/base titration, complexometric titration, redox titration, and precipitation titration. Students will delve into the theory behind these methods and explore their wide-ranging applications. In addition to theoretical knowledge, the course emphasizes practical skills. Students will learn how to calculate pH values for various acids, bases, salts, and buffers, enabling them to make accurate determinations in real-world scenarios. They will also develop the ability to evaluate and interpret the results obtained from titration experiments, enhancing their analytical capabilities. Throughout the course, selected classical quantitative analytical methods will be highlighted, giving students a deeper understanding of their importance and practical use. By the end of the course, students will have gained the necessary knowledge and skills to apply classical titration methods effectively in analytical chemistry, both in theory and practice.

Learning and Teaching Strategies إستراتيجيات التعلم والتعليم	
Strategies	The module will be conducted using a student-centered approach, placing emphasis on active participation and the cultivation of critical thinking skills. Through a combination of classes, interactive tutorials, and purposeful experiments, students will be actively engaged in the learning process, fostering the development of their critical thinking abilities. The aim is to create an interactive and dynamic learning environment that encourages students to actively participate, think critically, and attain a profound comprehension of the subject matter. By adopting this strategy, students will have the opportunity to apply their knowledge, engage in analytical discussions, and enhance their overall learning experience.

Student Workload (SWL) العمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) العمل الدراسي المنتظم للطالب خلال الاسبوع	79	**Structured SWL (h/w)** العمل الدراسي المنتظم للطلاب اسبوعيا	5
Unstructured SWL (h/sem) العمل الدراسي غير المنتظم للطالب خلال الاسبوع	46	**Unstructured SWL (h/w)** العمل الدراسي غير المنتظم للطلاب اسبوعيا	3
Total SWL (h/sem) العمل الدراسي للطلاب خلال الفصل	**125**		

Module Evaluation
تقييم المادة الدراسية

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

MODULE DESCRIPTION FORM
نموذج وصف المادة الدراسية

Delivery Plan (Weekly Syllabus)المنهاج الاسبوعي النظري	
	Material Covered
Week 1	General introduction, what is chemistry and its branches? Branches of analytical chemistry, Quantitative analysis Qualitative analysis.
Week 2	Weight and concentration unites, Concentration, The mole, Examples, Molarity, Normality. Percent concentration Part per million,
Week 3	Calculations of equivalent weight, Converting of percentage to molarity. The dilute solutions, Preparation of sol materials solutions, Preparation of liquid materials solutions
Week 4	Chemical equilibrium, Types of equilibrium, Equilibrium constants (Ionic -product constant of water. Solubili and Solubility product constant, examples, calculations.
Week 5	Dissociation of a weak acid or base, Hydrolysis constant (KH),
Week 6	Volumetric Methods of Analysis, Requirements for a primary standard, Volumetric Calculations for Acid-Base Titrations.
Week 7	Equilibrium in acid-base solutions, Calculating the pH of weak acids and base solutions, Calculating the pH of salts solutions, 1-Salt differential from strong acid and strong base.
Week 8	2-Salt differential from weak acid and strong base, 3-Salt differential from strong acid and weak base, 4-Salt differential from weak acid and weak base.
Week 9	Buffer Solutions, Calculating the pH of Buffer solutions, Buffer capacity, Acid – Base Titration, Acid – Base Indicators, Methyl Orange, Phenolphthalein
Week 10	Mid Term Exam.
Week 11	Titrating a Weak Acid with a Strong base, Differential titration, Titration mixtures of two acids, Titration one Base or Mixture of two Bases with Strong Acid.
Week 12	Introduction to Organic Chemistry, and Classes of Organic compound.
Week 13	Chemistry of the Functional Groups (Alcohols ,Aldehydes and Ketones, and Carboxylic Acids)
Week 14	General introduction, in Biochemistry
Week 15	Mid Term Exam 2

Learning and Teaching Resourcesمصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Fundamental of analytical chemistry by Skoog, West, Holler & Crouch, 8th , 2004.	Yes
Recommended Texts	1-Fundamental of analytical chemistry by Skoog, West, Holler, 6th , 1992. 2-Principles of instrumental analysis by Skoog, West, Holler & Crouch, 8th, 2004. 3-K. Burger D, Sc, "Organic regents in metal analysis", 1st,New York, 1973. 4- General Chemistry: The Essential Concepts 5th Edition by Raymond Chang	
Websites	https://www.goodreads.com/book/show/1568659.General_Chemistry	

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 (احتمال ياخذ فرار)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

Note: Marks with decimal places above or below 0.5 will be rounded to the higher or lower full mark accordingly. For instance, a mark of 54.5 will be rounded up to 55, while a mark of 54.4 will be rounded down to 54. The University strictly adheres to a policy that does not allow for "near-pass fails," and therefore, the only adjustment made to the marks awarded by the original marker(s) will be the automatic rounding as described above.

Ministry of Higher Education and Scientific Research - Iraq
University of Baghdad
College of Engineering
Department of Electrical Engineering

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Arabic Language**			**Module Delivery**	
Module Type	**Basic**			☒Theory ☒Lecture ☐Lab ☐Tutorial ☐Practical ☐Seminar	
Module Code	UoB12011				
ECTS Credits	2				
SWL (hr/sem)	50				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader	**Dr. Leqaa faleh owdaa**		**e-mail**	leqaa.falih@ircoedu.uobaghdad.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	11/06/2023		**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-تعلم مهارات الكتابة والاملاء والتعبير الصحيح خلال تطبيق قواعد اللغة العربية بشكل مفصل وتطبيقي على نصوص عربية.** **2- لفهم الجمع وأنواع الاسماء وكيفية التعامل معها.** **3- لفهم العدد واستعماله بشكل صحيح من حيث المطابقة والمخالفة للتفريق بين الضاد والظاء.** **4- للتفريق ومعرفة استعمال التاء المربوطة والتاء الطويلة.** **5-التمييز بين العلامات الاصلية والفرعية.** **6- تعلم استعمال الأدوات وعمل كل أداة ومعناها في التعبير.**
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	**هام: اكتب 6 مخرجات تعليمية على الأقل، ومن الأفضل أن تكون مساوية لعدد أسابيع الدراسة** **1-التعرف على كيفية جمع الأسماء وأنواع الجموع وسبب اختلافها وقائمة بالمصطلحات المختلفة المرتبطة ببلاغة اللغة العربية تعلم كتابة الهمزة وانواعها.** **2-وصف عمل الجمل الفعلية وأنواع الافعال** **3-ناقش وتفاعل ومشاركة قواعد الجمل الاسمية وعلامات الاعراب الاصلية والفرعية والتطبيقات ضمن نصوص أدبية وقرانية.** **4-القدرة على استعمال علامات الترقيم في كتابة البحوث والتقارير .** **5-التمييز بين الأدوات وأسلوب العطف والجر.** **6-التعرف على قواعد اللغة العربية الأساسية وتطبيقاتها.**
Indicative Contents المحتويات الإرشادية	**يتضمن المحتوى الإرشادي ما يلي.** **مقدمة في البداية التي أسس لها علماء اللغة العربية وكيف بدأت كتابة المؤلفات بالمعاجم والقواعد وجمع اللهجات واستقراء اللغة وحركة الترجمة والفتوحات وتطور اللغة.** **ومشكلات المراجعة (6 ساعات)** **ودراسة الجمل وانواعها والافعال والعلامات الاصلية والفرعية والعدد. ومشكلات الكتابة والاملاء التي يقع فيها الطلبة في التفرقة بين الضاد والظاء والتاء المربوطة والطويلة والهمزة وانواعها وكيفية كتابتها. (6ساعات)** **ودراسة الموضوعات الصرفية التي تخص المشتقات من اسم الفاعل واسم المفعول وصيغة المبالغة واوزانها ومعانيها وصيغها السماعية والقياسية..** **وعلامات الترقيم وكيفية توظيفها في كتابة التقارير والبحوث والمخطوطات.** **(6ساعات)**

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	**كتب شيئًا مثل: الاستراتيجية الرئيسية التي سيتم تبنيها في تقديم هذه الوحدة هي تشجيع الطلاب على المشاركة في التمارين، مع تحسين مهارات التفكير النقدي وتوسيعها في نفس الوقت. سيتم تحقيق ذلك من خلال الفصول والبرامج التعليمية التفاعلية ومن خلال النظر في أنواع التجارب البسيطة التي تتضمن بعض أنشطة أخذ العينات التي تهم الطلاب.**

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	Structured SWL (h/w) الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.25
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	4	20% (20)	5 and 10	LO #1, #2 and #10, #11
	Assignments	6	10% (10)	2,3,6,8,10 and 12	LO #3, #4 and #6, #7
	Projects / Lab.				
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	Midterm Exam	2hr:	10% (10)	10	LO #1 - #10
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	علامات الترقيم والتنقيط والنواسخ
Week 2	المشتقات.
Week 3	الجملة الاسمية
Week 4	الجملة الفعلية
Week 5	الفرق بين الضاد والظاء
Week 6	التاء المربوطة والتاء المفتوحة
Week 7	الهمزة وانواعها
Week 8	العدد

Week 9	**لعلامات الاصلية والعلامات الفرعية,الجمع**
Week 10	**Midterm Exam**
Week 11	**اعلام عراقيون بدر شاكر السياب والجواهري**
Week 12	**العطف**
Week 13	**حروف الجر**
Week 14	**الاسم المؤنث والاسم المذكر**
Week 15	**الحذف والزيادة**
Week 16	**الأسماء المنصوبة**

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	جامع الدروس العربية وشرح ابن عقيل	Yes
Recommended Texts	Electromagnetic theory (book). 2000.vol.1	yes
Websites	https://www.coursera.org/browse/physical-science-and-engineering/electrical-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.

	Ministry of Higher Education and Scientific Research - Iraq University of Baghdad College of Engineering Department of Electrical Engineering	

MODULE DESCRIPTOR FORM
نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	HUMAN RIGHTS & DEMOCRACY			**Module Delivery**	
Module Type	BASIC			***Theory** **Lecture** **Tutorial** **Seminar**	
Module Code	**UoB12012**				
ECTS Credits	2				
SWL (hr/sem)	50				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Type Dept. Code		**College**	Type College Code	
Module Leader	**Ansam Faik Abdul - Rezzak Al-Obidi**		**e-mail**	**ansam.faik@sc.uobaghdad.edu.iq**	
Module Leader's Acad. Title	**Lecturer**		**Module Leader's Qualification**	M.Sc.	
Module Tutor	None		**e-mail**	None	
Peer Reviewer Name			**e-mail**		
Review Committee Approval	8/06/2023		**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. This course deals with the basic concept of human rights& democracy** **2. Clarifying and training students on the most important principles of human rights and democracy.** **3. Organizing discussions and presentations on the most vital and basic topics affecting community building, related to human rights and democracy..** **4. Adopting teamwork with students to develop their cognitive abilities and create a spirit of cooperation, initiative, creativity and exchange of views in an effort to build the foundations of peaceful community coexistence.** **5. Providing society with conscious youth aware of the importance of its role in building society, its unity and cohesion through spreading the culture of human rights and establishing the rules of correct democracy.** **6. Human rights guarantee the protection and respect of an individual's interests, even when he or she is not a majority. In a democratic climate, sustainable democratic power cannot be conceived without respecting, protecting and fulfilling human rights. Through their combined influence, they allow the individual a life based on the freedom of self-determination and collective. That is why the protection and realization of human rights truly form the basis of the democratic project.**
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	**Cognitive goals.** **1. Educate students and inform them about the importance of human rights and democracy.** **2. Recognize and understand the methods of teamwork for the exchange of ideas and creative discussions** **3. Developing students' performance through guidance in preparing mini-research on modern vocabulary on vital topics related to human rights and democracy.** **4. Providing students with creative development abilities in modern proposals and creative developmental ideas by discussing awareness videos presented on electronic classes.** **5. Developing the skills of sharing opinions and ideas and respecting others opinion.** **6. Objective Skills :** **7. Basic knowledge in the principles of human rights and democracy.**

	8. Building the innovative personality of knowledge through online research and the transfer and exchange of information. **9. Discuss the various properties about everything related to human rights and their importance in our daily lives.** **10. Identify everything related to democracy and the foundations of the performance of the electoral process and its importance in building the nation.** **11. Identify the capacitor and inductor phasor relationship with respect to voltage and current.**
Indicative Contents **المحتويات الإرشادية**	**- Developing the student's analytical and critical skills regarding the reality and future of human rights and democracy** **- Training the student on the importance of active participation in aspects of public life, such as promoting respect for the principles of public human rights and active participation in political and cultural life.** **- Enable students to understand the importance of education and its role in spreading the culture of human rights and democracy in building a civilized society based on good governance, the most important component of which is belief in human rights, education and active participation in governance through free and fair elections.**
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 discussions, dialogues and group work lectures & exercises, while at the same time refining and expanding their critical thinking skills. There are many teaching and learning methods used, and the most important of these methods are: Theoretical lecture, discussion and dialogue, panel discussions on certain topics, theoretical student research** **Library and electronic activities (which helps students to reach the following results:** **1- The scientific ability to distinguish between correct information and wrong information.** **2- Ease of scientific drafting and ease of correction.** **3. Ability to memorize and guess.** **4- The ability to link concepts and principles with reality.** **5. Ability to invoke, link, interpret.**

Student Workload (SWL) الحمل الدراسي للطالب			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	33	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	17	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	1.25
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	4	20% (20)	5, 10	LO #1, 2, 10 and 11
	Assignments	2	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Report	1	10% (10)	13	LO # 5, 8 and 10
Summative assessment	**Midterm Exam**	2 hr	10% (10)	10	LO # 1-10
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري مادة حقوق الانسان و الديمقراطية	
	Material Covered **Human rights & Democracy**
Week 1	**Familiarity with the concept of human rights and the definitions approaching it, discussing, dismantling and criticizing them in a scientific way in order to reach the most accurate and objective. - Definition of right , of human, of the concept of human rights. Human rights qualities, Types of human rights Human Rights Categories**
Week 2	**The historical development of human rights: Orcagina Reforms 1- Urnamo Law.2- The law of Ishtar Bit. 3- The law of the Kingdom of Eshnuna.4- Code of Hammurabi.**
Week 3	**Human rights in other ancient civilizations: 1- Indian and Chinese civilization 2- Pharaonic civilization of Egypt 3- Greek civilization 4- Roman civilization**
Week 4	**Human rights in heavenly laws** **Human Rights in Judaism, Human rights in Christianity, Human Rights in Islam.**
Week 5	**Human rights in Renaissance - modern and contemporary societies** **Introducing the student to the most important UN document in the field of human rights, which was approved and approved by the Assembly on January 10, 1948**

	Universal Declaration of Human Rights 1948.
Week 6	**Non-governmental organizations defending human rights: Amnesty International, b. International Committee of the Red Cross. Arab Organization for Human Rights.**
Week 7	**Definition of the phenomenon of administrative corruption, Types of administrative corruption, Causes of administrative corruption. The repercussions of the phenomenon of administrative corruption on human rights and society. Successful treatments to combat corruption and protect society from it.**
Week 8	**Introduction - Historical development of the concept of democracy, definition of democracy, freedom. The difference between freedom and democracy, The relationship between the rights and public freedoms of individuals and democracy, Islamic views in a democratic system of government , Shura and Democratic System**
Week 9	**Specifications and duties of the Islamic ruler reading, The era of Imam Ali "peace be upon him" to his governor over Egypt: Specifications of the Islamic ruler: First: The moral and doctrinal components of the ruler Second: The general culture of the Islamic ruler, Third: Acumen and good choice: -Fourth: Direct relationship with people: Fourth: Direct relationship with people.** **Duties of the Islamic ruler:** **First: Social Reform: Second: Achieving security and defense** **Third: The architecture of the country "economic development"**
Week 10	**Midterm Exam, Forms of democracy: (1): Direct democracy ,(2): Semi-direct democracy ,** **(3): Parliamentary democracy (parliamentary representation)4): Liberal Democracy** **(5): consociation Democracy, (6): Delegated Democracy.**
Week 11	**Conditions for the success of the elements and pillars of the democratic system General conditions for the success of the democratic system: 1. Respect for human rights, 2. Political pluralism 3. Peaceful transfer of power 4. Political equality 5. Respect the principle of the majority 6. Existence of the rule of law.**
Week 12	**Components or elements of democracy:** **1 – Citizenship 2- Political participation 3. Elections 4. MPs and Responsibility 5. Opposition 6- Separation of government and parliament 7- Constitutional legitimacy**
Week 13	**The concept of elections and their legal adaptation: First: The concept of election Second: Legal adaptation of the Election, Third: Conditions of Election, Fourth: Concepts of Elections, Fifth: Types of Electoral Systems. Assessing the Democratic System, Pros and advantages of the democratic system, Disadvantages and disadvantages of the democratic system, Implementing the democratic system in Iraq.**
Week 14	**Lobbyists: First: the concept and definition. Second: Types of pressure groups. Third: The methods of pressure groups that they use to achieve their goals.** **Fourth: Lobbying and Democracy.**
Week 15	**Preparatory Week**
Week 16	**Final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Martyrdom verses from the Holy Quran Mohammed Al-Tarawneh et al., International Humanitarian Law, ICRC, Amman, 2005 Diamond Larry, Democracy: Its Development and Ways to Enhance It, translated by Fawzia Naji, Dar Al-Mamoun for Translation, Iraq, 2005.	Yes
Recommended Texts	journal.un.org Hadi, Riad Azabz. (2005). Human rights (evolving contents and protection) (Baghdad).	Yes
Websites	Universal Declaration of Human Rights | United Nations https://sc.uobaghdad.edu.iq/?page_id=8415 https://www.youtube.com/@ansamalobidimanagerofhuman2891	

APPENDIX:

GRADING SCHEME مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group (50 - 100)	**A** - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings

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

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