

## General

الدرجات					الساعات			١٥ م ج	لغة انجليزية (1)
oral	ACT	Mid_T	Prac	Wr.	CH	P/T	L		
10	10	30	0	50	2	-	2	English Language (1)	UR015

**1- Listening & Speaking:**  
**A- (Listening):** This part of the course aims at training the students for listening and understanding audio-visual material  
**B- (Speaking):** This part helps the students to speak simple and correct short sentences fluently.  
**2- Reading:**  
 This part aims at training students for correct reading, building up vocabulary and promoting grammatical structures.  
**3- Writing:**  
 This part helps the students to spell English words correctly and to use the punctuation marks.  
**4- Grammar:**  
 This part aims at providing the students with knowledge of the grammar of the target language, and its basic structures.  
**5- Translation:**  
 This part aims at developing the students' abilities in translating scientific texts both into and from English.

الدرجات					الساعات			٢٠ م ج	لغة انجليزية (2)
oral	ACT	Mid_T	Prac	Wr.	CH	P/T	L		
10	10	30	0	50	2	-	2	English Language (2)	UR020

**II- English Language (2):** 2 hours per week in the 2nd term  
**Terminology:**  
 This course aims at introducing the students to the Morphology of the target language . The students study the structure of words. They start with understanding the meaning of a morpheme, then they learn the different types of morphemes, after that they intensively learn the use of affixes. Finally, they end with learning lists of scientific terms in the different fields of science with an increasing ability to guess the meaning of any new term, especially after studying prefixes & suffixes as mentioned above.

الدرجات					الساعات			٥٠ م ج	قضايا مجتمعية
oral	ACT	Mid_T	Prac	Wr.	CH	P/T	L		
10	10	30	0	50	0	-		Societal Issues	UR050

الدرجات					الساعات			١١ م ج	ادارة اعمال
oral	ACT	Mid_T	Prac	Wr.	CH	P/T	L		
10	10	30	0	50	2	-	2	Management	UR011

الدرجات					الساعات			١٢ م ج	تاريخ العلوم
oral	ACT	Mid_T	Prac	Wr.	CH	P/T	L		
10	10	30	0	50	2	-	2	History of Science	UR012

**The importance of studying history of science**  
 An overview on the science of ancient scientists  
 Presentation of the history of most prominent theories in mathematics and physics  
 Presentation of the history of the most important developments of biological sciences (embryogenesis, photosynthesis, genetic engineering, reproduction).  
 Philosophical reflections of modern biology.

## General

### Means of honoring scientists

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oral	ACT	Mid_T	Prac	Wr.	CH	P/T	L
10	10	30	0	50	2	-	2

١٣ م ج التغذية الصحية

Healthy Feeding UR013

- 1- A healthy diet and our body
- 2- Components of healthy diet: carbohydrates, lipids, proteins, minerals, vitamins, and fiber.
- 3- Healthy eating pyramid.
- 4- How to read and interoperate nutrition facts.
- 5- Feeding control and the factors that regulate the quantity of food intake especially Leptin and Ghrelin
- 6-Physiology of the Human digestive system (digestion, absorption, metabolism and elimination)
- 7- Anabolic and catabolic hormones.
- 8- Definition and calculation of basal metabolic rate (BMR).
- 9- Body mass index and body volume index.
- 10- Feeding abnormalities (Obesity and malnutrition)
- 11- Definition and types of food additives with E number.
- 12- Example for some popular diseases (bronchial asthma, hypertension, anemia, coronary artery disease, hepatitis, diabetes mellitus, Alzheimers)

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oral	ACT	Mid_T	Prac	Wr.	CH	P/T	L
10	10	30	0	50	2	-	2

١٤ م ج التفكير العلمي

Scientific Thinking UR014

- The nature of scientific thinking  
Characteristic of scientific thinking  
The importance of scientific thinking for the renaissance of societies  
Obstacles of scientific thinking practices  
Science and non-science  
Distinguish between facts and myths  
Scientists' personality  
Using scientific thinking to identify and solve problems  
Different scientific approaches to solving the problems

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oral	ACT	Mid_T	Prac	Wr.	CH	P/T	L
10	10	30	0	50	2	-	2

١٦ م ج لغة عربية

Arabic Language UR016

الدرجات					الساعات		
oral	ACT	Mid_T	Prac	Wr.	CH	P/T	L
10	10	10	20	50	2	2/-	2

١٠٠ ارك الحاسب الالى

Computer Sciences MC100

- Fundamentals of programming and computer languages - Algorithm and Flowcharts - Elements of Language under case - Basic Instructions in Language under case - Control Instructions - Arrays and dimension statement - Subprograms - Some applications.

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oral	ACT	Mid_T	Prac	Wr.	CH	P/T	L
10	10	30	0	50	3	-/2	2

١٠٠ ا ر رياضيات عامة (1)

Mathematics (1) M100

- Calculus: Functions of one variable - Limits and Continuity - Derivatives - Applications of Differentiation - Taylor and McLaurin series, Indefinite and definite integrals.  
Algebra: Mathematical induction - series - Partial fractions - Matrices and systems of linear equations -

## General

Approximate solutions of non-linear equations.

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10	10	30	0	50	3	-/2	2

رياضيات عامة (2) ١٠٥

Mathematics (2) M105

Calculus: Techniques of integration - Definite integrals and their properties- improper integral – numerical integration - Applications of definite integrals.  
Geometry: Coordinate systems in the plane - Straight lines and circles in general forms - Conic sections - Geometric transformations in the plane - Coordinate systems in the space - The plane and the straight lines in the space and surfaces of revolution of second order.

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10	10	10	20	50	3	3/-	2

فيزياء عامة (1) ١٠٠

Physics (1) P100

Physical quantities - Units and dimensional analysis - Vectors - The laws of motion in one- and two- dimensions and its applications - Newtown's second Law of motion and its applications. Work and energy - Heat and heat conduction - The kinetic theory of gases - Specific heat of gases - First law of thermodynamics. 12 Experiments related to the above topics.

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فيزياء عامة (2) ١٠٥

Physics (2) P105

The nature and propagation of light - Reflection and refraction at plane surface - Lenses & Mirrors, Eye's structure and camera - Microscopes and Telescopes - Coulomb law and electrostatic fields - Electrostatic potential- Capacitance and dielectrics- Electric current, DC circuits and Krichhoff's Rules-Magnetic field and magnetic force - Electromagnetic induction. 12 Experiments related to the above topics.

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كيمياء عامة (1) ١٠٠

Chemistry (1) C100

(A):Atomic Spectra – Electron Orbital and Quantum Numbers – Quantum Energy Levels in Atoms – Basic Concepts of Bonding Electronegativities – Lewis Structure – The Octat Rule – Dipolemoment – Resonance Hybridization in Molecules – Geometrics of Molecules – Orbital Configuration for Diatomic Molecules.  
(B):State of Matter – Introduction in Surface and Colloids Chemistry – Electrolytic Cell – Electrochemical Cells – Potential of Electrode (Selected practical experimentals )

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كيمياء عامة (2) ١٠٥

Chemistry (2) C105

(A): Chemical Equilibrium – Ionic Equilibrium – Basic of Qualitative Analysis – Solution Chemistry.  
(B):Introduction on Organic Chemistry-Bonding in Organic compounds – Hybridization in Carbon Compounds – Physical Properties of Org. Compounds – Nomenclature, Synthesis and Chemical Reactions of alkanes, alkenes and alkynes  
(Practical: Selected practical experiments)

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اساسيات الجيولوجيا ١٠٠

Principles of Geology G100

## General

**Origin of Planet Earth: Constituents of the Earth's crust (crystals, minerals, rocks) – Classification of rocks**  
**Internal Processes: Dynamics, structures and plate tectonics – Development of structural traps and ore deposits**  
**External Processes: Weathering – Erosion – Wind action – Geological work of waters (surface, groundwater, seas and oceans) – Formation of hydrocarbons and sedimentary ores – Development of stratigraphic traps**  
**Time scale: Geologic timescale and fossil records**

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حيوان عام	ح ١٠٠
General Zoology	Z100

**Protoplasm - Organization and function of animal cell - Study of the animal tissues - Life functions - Introduction to early development of animals - Characters and classification of the major animal phyla**

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نبات عام	ان ١٠٠
General Botany	B100

**Cell structure – plant tissues – Anatomy of primary plant organs – Classification of plant kingdom – General aspects of virus, bacteria, algae and fungi – Flower structure, inflorescences and fruits – Selected families of flowering plants**

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10	10	30	0	50	2	0	2

امن الحاسب	٤٥٣ رك
Computer Security	MC453

**Overview , characteristics of computer intrusion , points of security vulnerability, methods of defense, Basic encryption and decryption: different types of ciphers, characteristic of good ciphers ,Security involving programs, database security, reliability and integrity , sensitive data , the inference problem, multilevel data security.**