



اللائحة الدراسية:

الفصل الدراسي	الفرقة والمستوى	عدد الساعات الأسبوعية			عدد الساعات	اسم المقرر	كود أو رقم المقرر
		نظري	تمرين	عملي			
الأول	الأولي (بيولوجي وجيولوجيا)	4	0	3	7	كيمياء عامة	104ك
		4	0	2	6	نبات عام	101ن
		4	0	2	6	حيوان عام	101ح
		2	0	2	4	جيولوجيا طبيعية وتاريخية	101ج
		2	0	2	4	ضوء وكهربية ومغناطيسية	103ف
		0	1	2	3	تفاضل وتكامل وجبر	105ر
		4	0	3	7	كيمياء عامة	105ك
الثاني	الثاني (بيولوجي وجيولوجيا)	4	0	2	6	نبات عام	102ن
		4	0	2	6	حيوان عام	102ح
		2	0	2	4	بللورات ومعادن	102ج
		2	0	2	4	حرارة وخواص مادة	104ف
		0	1	2	3	تفاضل وتكامل وهندسة	106ر
		0	1	2	3	لغة انجليزية	102ل
		4	0	4	8	بصريات المعادن - معادن	203ج
الأول	الثانية (جيولوجيا)	2	0	2	4	حفريات كبيرة	204ج
		0	0	2	2	الديناميكا الحرارية الكيميائية	205ك
		4	0	2	6	كيمياء عضوية	206ك
		2	0	2	4	ضوء فيزيائي	205ف
		0	1	2	3	رياضيات	207ر
		0	0	2	2	حقوق الانسان والمبادئ القانونية العامه	بدون
		4	0	4	8	صخور نارية - صخور رسوبية	205ج
الثاني							



		2	0	2	4	حفريات دقيقة	ج206
		4	0	2	6	كيمياء غير عضوية	ك207
		0	1	2	3	كيمياء عضوية	ك208
		2	0	2	4	فيزياء ذرية واطياف	ف208
		2	0	1	3	علوم الحاسب	ر208
		0	1	2	3	لغة انجليزية	ل202
الأول	الثالثة (جيولوجيا وكيمياء)	2	0	3	5	بيئة ترسيب - جيولوجيا تركيبية وميكانيكا الصخور	ج301
		4	0	4	8	جيولوجيا المياه - طبقات	ج307
		0	0	2	2	فيزيائية (كيناتيكا التفاعلات والغازات)	ك311
		4	0	2	6	غير عضوية (العناصر الانتقالية والمتراكبات)	ك312
		4	0	3	7	عضوية (فيزيائية وحيوية وفراغية)	ك325
		2	0	1	3	مبادئ علم الحاسب	ر338
		0	4	3	7	جيوكيمياء الصخور وتحليل معدنى جيولوجيا تصويريه	ج308
		4	0	4	8	مساحة - صخور قاعية و متحولة	ج309
		4	1	5	10	فيزيائية السطوح - الحفر والغرويات - تحليلية (كمية ووزنية وخامات)	ك326
		4	0	2	6	عضوية (حلقية متجانسة)	ك323
الثاني		0	0	1	1	احتمالات واحصاء	ر339
		0	1	2	3	لغة انجليزية	ل302
		2	0	2	4	جيولوجيا البترول	ج411
		2	0	3	5	جيوفيزياء جيولوجيا اشعاعية	ج412
الأول	الرابعة (جيولوجيا وكيمياء)	4	0	2	6	الرواسب المعدنية - فى مصر - جيولوجيا الشواطىء	ج405
		0	1	2	3	كيمياء فيزيائية (الغرويات والكهربية)	ك421
		4	1	2	7	كيمياء غير عضوية (تطبيقية)	ك422
		4	0	2	6	كيمياء عضوية (البترول)	ك423
		2	1	2	5	جيولوجيا مصر	ج406
		2	1	2	5	جيوفيزياء	ج407
الثاني							



		4	0	2	6	جيومورفولوجيا تطبيقية - تدريب حقل	ج408
		4	1	2	7	كيمياء فيزيائية (ضوئية واجهزة طيفية)	ك424
		0	0	2	2	كيمياء غير عضوية (متقدمة)	ك425
		4	0	2	6	كيمياء عضوية (فلزية وطيفي)	ك426
		0	0	2	2	بحث او مقال	بدون
		0	1	2	3	لغة انجليزية	ل402
		2	0	1	3	حاسب	بدون
		120	18	121	259	المجموع	



المحتوى العلمى:

محتويات المقررات	الرمز الكودي: 101 ج	اسم المقرر:	جيولوجيا طبيعية وتاريخية	التخصص:	علوم بيولوجية وجيولوجية
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Topic
1. Introduction to Geology.
2. Origin of the Earth.
3. Internal structure of the Earth.
4. Primary and secondary sedimentary structures.
5. Mineralogy.
6. Rock types.
7. Physical, mechanical and chemical weathering.
8. Wind and sand dunes forms.
9. Oceans and Seas.
10. Underground water
11. Earthquakes, volcanoes and plate tectonic.
12. Review and open discussions.

الرمز الكودي: 104 ك اسم المقرر: كيمياء عامة الفرقة:

Topic
Gaseous state
Thermochemistry
Chemical equilibrium
Solutions
Problems in physical Chemistry
Chemical Calculations
Atomic spectra and Quantum numbers
Properties of of periodic table
Chemical bonding
Determination of density
Determination of viscosity
Determination of surface tension
Determination of empirical formula of an oxide
Determination of hydrate
Stoichiometric determination
Determination of the molecular weight of volatile liquid
Determination of the heat of formation of MgO
Determination of heat of neutralization (strong acid and strong base)
Determination of heat of neutralization (strong acid and weak base)
Determination of heat of neutralization (weak acid and weak base)

الرمز الكودي: 101 ن اسم المقرر: نبات عام الفرقة: المستوى:



Topics
General characters of monocot and dicot plants.
Types of seeds and germination
Different shapes of plant organs and their modifications.
Adaptation of plants to different habitats.
Studying the organisms' diversity.
Classification the organisms in Plant kingdom according to their specific characters
Studying the general characters for each group in the classification using an example for each one.

الرمز الكودي: 101 ح اسم المقرر: حيوان عام :الفرقة:

Topic
Introduction to zoology (physiology, cytology and histology).
Bases of anatomy and essential physiological processes of human digestive, cardiovascular, respiratory and renal systems-Essential processes of human neurophysiology and renal systems.
General and Functional cytology
General and descriptive animal histology
Safety Statement of Lab. work and microscopical
external features and musculature of the experimental
Anatomy of nervous system of Egyptian toad
Skeleton of Egyptian toad
General histology (connective, muscular and nervous animal tissues
Respiratory, endocrine, reproductive, skin, circulatory and excretor

الرمز الكودي: 103 ف اسم المقرر: ضوء وكهربيه ومغناطيسييه :الفرقة: الاولى

	Topics
Geometrical optics	Nature of light
	Refraction through lenses
	Optical instruments
	Dispersion
	Photometry
Electricity and magnetism	Charge and matter, Electric current
	Electric field for a group of point charges
	Electric field of continuous charges
	Electric potential and applications, Condensers
	Coulomb's law, Electric field
	Electric dipole and transient current
	Dielectric current and Static magnetism



Practica I	Electromotive forces and induction
	convex lenses
	concave lenses

الرمز الكودي: 105 ر اسم المقرر: تفاضل وتكامل وجبر الفرقة:

Topic
Inequality part 1.
Inequality part 2.
Limits and the continuity part 1.
Limits and the continuity part 2.
Derivatives part 1.
Derivatives part 2.
Application of Derivatives part 1.
Application of Derivatives part 2.
Application of Derivatives part 3.
Mathematical Induction part 1.
Mathematical Induction part 2.
Mathematical Induction part 3.
Partial fraction.

الرمز الكودي: 102 ج اسم المقرر: بلورات ومعادن الفرقة:

Topic
Introduction to crystal elements, symmetry and how crystals formed.
Crystal, Elements of crystals: Faces, Edges, Solid angles, Interfacial angles, Law of constancy of interfacial angles, Contact goniometer & Reflection goniometer, Crystal habit, Crystal form "Order", Crystal elements, Axial cross, Crystallographic axes, Crystallographic angles
Crystal symmetry, Elements of symmetry: Axes, Plane, Centre-of symmetry, Rotation symmetry axes & Rotation inversion symmetry axes, Axial ratio, Parameters, Indices, Miller indices, Crystal system & Crystal classes, Orthogonal projection & Clinographic parallel perspective
Crystal systems (I): Cubic "Isometric", Tetragonal, Hexagonal, Trigonal.
Crystal systems (II): Orthorhombic, Monoclinic, Triclinic.
Introduction to formation of minerals and chemical formula of mineral.
Physical Properties of Minerals, Optical, Cohesive Electrical, Magnetic, Thermal, Radioactivity properties.
Density and Specific Gravity, Taste, Odor, Feel, Isomorphism, Polymorphism, Pseudomorphism.
Origin of Minerals, Classification of Minerals, Chemical Classification, Silicates Subclasses, Determinative Mineralogy
Rocks, Rock cycle, Igneous-, Sedimentary-, Metamorphic- rocks, Minerals and Gemstones.
Review and open discussions.

الرمز الكودي: 105 ك اسم كيمياء عامة الفرقة: الأولى



المقرر:

Topic
Physical Chemistry
The Phenomena of electrolysis, Faraday's laws
Electrical Conductance, EMF.
Electrod Potential, Chemical and electrical energy.
Cell reaction and electrochemical series
Solid state and Crystallographic systems. Inorganic Chemistry
The VSEPR model
V.B. Theory(Hybridization of orbitals)
Molecular geometry and Resonance
M.O. Theory
Oxidation- Reduction reactions
Practical part

الرمز الكودي: 102 ن اسم المقرر: نبات عام الفرقة: الأولى

Topic
Colloids
Plant cell
Diffusion, Osmosis and Permeability
Plant water relationships
Enzymes
Photosynthesis
Respiration
Plant Growth
Plant cell components (living and on-living)
Cell wall
Simple tissues (Meristematic and permanent)
Epidermal tissues and complex tissues
Plant organs (monocot & dicot), stem, root and leaves
Secondary structures in plant, Periderm, Tylosis, Lenticels

الرمز الكودي: 102 ح اسم المقرر: حيوان عام الفرقة: الأولى

Topic
Instruments in taxonomy
Bases of taxonomy
Five kingdoms theory
General characters and taxonomy of Sarcodina and Ciliophora
General characters and taxonomy of Zoomastigophora and Apicomplexa
General characters and taxonomy of Porifera
General characters and taxonomy of Hydrozoa and Scyphozoa
General characters and taxonomy of Anthozoa
General characters and taxonomy of turbellarians
General characters and taxonomy of monogeneans



General characters and taxonomy of Cestoda

الرمز الكودي: 104 ف اسم
المقرر: حرارة وخواص مادة الفرقة:
الأول

Topic
Temperature and thermometers
Heat estimation
Thermal expansion
Change of phase
Heat transfer
Kinetic theory of gases
Units and dimensions (Fundamental units - Derived units - Dimension theory and its applications)
Scalar and vectors -Linear motion - Planer motion - Newton`s second law
Simple harmonic motion -SimpMonent of inertia for some bodies- Simple pendulum - Some experiments
Hook`s law-Elasticity modulii-Relation between elasticity modulii-Stress-Strain curves-Some exp
Pressure-Pascal`s rule-Archimede`s rule- Bernoulli`s equation - Surface tension-Some ex
Bernoulli`s equation - Viscosity(Poiseuill`s formula- Stokes law)-Some experiments

الرمز الكودي: 106 ر اسم المقرر: تفاضل وتكامل وهندسة الفرقة:

Topic
المتباينات
النهايات والاتصال
المشتقات
تطبيقات على المشتقات
الاستنتاج الرياضي
الكسور الجزئية
الحجم
الخط المستقيم
الدائرة

الرمز الكودي: 102 ل اسم
المقرر: لغة انجليزية الفرقة:
الاولى

Topic
Types of common rocks
Writing paragraph + topic sentence
Countable and 1.
Animal cell structure
Punctuation
The use and 1. مقابلات فردية -use of articles + using a Relative clause
Subject verb agreement + Quit & Rather
Lightening

الرمز الكودي: 203 ج اسم
المقرر: بصريات المعادن - الفرقة:
الثاني



		المقرر:	معادن
Optical Mineralogy	Topic		
	13. Introduction to optical mineralogy.		
	14. Nature of light and the polarizing microscope.		
	15. Istropic substance and properties in plane polarized light.		
	16. Properties between crossed nicols.		
	17. Uniaxial minerals and Biaxial minerals.		
	18. Interference figures.		
	19. Scheme of identification mineral groups.		
	Mineralogy	20. Introduction to mineralogy.	
21. Groups of olivine, zircon, sphene and beryl minerals			
22. Groups of pyroxene and amphibole minerals.			
23. Groups of mica, serpentine, talc and chloride minerals.			
24. Groups of feldspars and silica minerals.			

الفرقة: حفريات كبيرة اسم المقرر: 204 ج الرمز الكودي:

Topic		
Preservation and collection of fossils		
Describing single specimens.		
Ontogenic variations		
Evolution and fossil record		
Protozoa, Foraminifera		
Coelentrata		
Bryozoa and Porifera		
Brachiopoda		
Bivalvia.		
Gastropoda		
Cephalopoda.		
Echinodermata.		

الفرقة: الثانية: الديناميكا الحرارية الكيميائية اسم المقرر: 205 ك الرمز الكودي:

Topic		
Introduction of thermodynamics		
First law of thermodynamics		
Second law of thermodynamics		
Third law of thermodynamics		
Chemical equilibrium in solids		
Entropy relations		

الفرقة: ضوء فيزيانى اسم المقرر: 207 ف الرمز الكودي:

Topic	
Simple harmonic m	
Simple harmonic m	
nce part1-3	
nce part 4	



Interference part 5
Diffraction of light part 1
Diffraction of light part 2
Diffraction of light part 3
Polarization of light part 1
Polarization of light part 2
Polarization of light part 3
Polarization of light part 4

الرمز الكودي: 207ر اسم المقرر: الرياضيات الفرقة: الثانية

Topic	
Polar coordinates and its applications part 1.	
Polar coordinates and its applications part 2.	
Polar coordinates and its applications part 3.	
Partial derivatives part 1.	
Partial derivatives part 2.	
Partial derivatives part 3.	
Multiple integrals part 1.	
Multiple integrals part 2.	
Multiple integrals part 3.	
Improper integrals part 1.	
Improper integrals part 2.	
Taylor and Maclaurin series part1.	
Taylor and Maclaurin series part2.	

الرمز الكودي: 206ك اسم المقرر: كيمياء عضوية : الفرقة:

Topic	
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- Introduction of organic compounds.
- Nomenclature of organic compounds.
- Chemistry of hydrocarbons.
- Chemistry of alkyl halides.
- Chemistry of Alcohols.
- Chemistry of Aldehydes and ketones.
- Chemistry of Acids.
- Chemistry of acids derivatives.
- Chemistry of amines.
- Chemistry of ethers

الرمز الكودي: 205 ج اسم المقرر: صخور نارية – صخور رسوبية الفرقة: الثاني

Topic	
Igneous	Introduction: fundamental concepts.
	Forms of extrusive and intrusive igneous rocks
	Textures of extrusive and intrusive igneous rocks.
	Composition of igneous rocks: rock-forming elements, rock-forming minerals.



Sedimentary Rocks	Structures of igneous rocks
	Magma differentiation.
	Classification of igneous rocks.
	Evolution of igneous rocks according to the descriptions of appearance, field and microscopic studies
	Methods of collecting the samples.
	The Arabian-Nubian Shield and the occurrence of the main igneous rocks
	Introduction of Sedimentary Rocks
	Clastic sedimentary rocks
	Conglomerates
	Sandstones
	Mudstones
	Diagenesis of Clastic sedimentary rocks
	1. مقابلات فردية Clastic sedimentary rocks
	Limestones
Dolomites	
Evaporites	
Diagenesis of 1. مقابلات فردية Clastic sedimentary rocks	

الفرقة: حفريات دقيقة اسم المقرر: 206 ج الرمز الكودي:

Topic	
Introduction	
Importance of microfossils.	
Collection, preparation and examination	
The living foraminifera	
Test morphology and wall composition	
Factors controlling the distribution of foraminifera	
Classification of foraminifera	
Suborder Fusulina and Miliolina	
Suborder Rotaliina	
Superfamily Globigerinacea.	
Superfamily: Cassidulinacea, 1. مقابلات فردية ionacea and Carterinacea.	
General history of foraminifera and their applications.	

الفرقة: كيمياء غير عضوية اسم المقرر: 207 ك الرمز الكودي:

Topic	
1-Introduction to S-P block	
2- Hydrogen and hydrides	
3- Group I to VII	
4- Group 0	
Introduction of volumetric analysis	
Preparation of standard solutions, Standardization of HCl	
Titration of strong acid against strong base	
Titration of strong acid against weak base	
Titration of weak acid against strong base; determination of the % of acetic acid in vinegar.	



Analysis of Carbonate and bicarbonate mixture
Analysis of $H_3PO_4 + CH_3COOH$ mixture
Analysis of $H_3PO_4 + HCl$ mixture
Introduction of Redox reactions; Standardization of oxalic acid
Determination of H_2O_2
Determination of Fe(II)
Iodometric and Iodimetric titrations
Precipitation titrations

الفرقة:	كيمياء عضوية	اسم المقرر:	208 ك	الرمز الكودي:
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a: Aromatic Compounds

- 1- Nomenclature of aromatic compounds.
- 2- Methods for preparation of benzene and its derivatives.
- 3- Reaction of benzene ring.
- 4- Phenols.
- 5- Aromatic alcohols.
- 6- Aromatic aldehydes and ketones.
- 7- Aromatic carboxylic acids.
- 8- Aromatic amines.

b: Bi-

- 1- Introduction and classification.
- 2- Nomenclature of the bi-functional compounds.
- 3- Diol, preparation and properties.
- 4- Diketones, preparation and properties.
- 5- Hydroxy aldehydic compounds, preparation and properties.
- 6- Hydroxy acid compounds, preparation and properties.
- 7- Dicarboxylic acid compounds, preparation and properties.
- 8- Diamine compounds, preparation and properties.
- 9- β -keto ester compounds, preparation and properties.

الرمز الكودي: 208ف	اسم المقرر:	: فيزياء ذرية واطياف	: الفرقة:	الثاني
Topic				
1- Cathode ray				
2- Electromagnetic radiation				
3- Spectra				
4- Atomic models				
5- Atomic hydrogen spectra				
6- Bohr theory & hydrogen atom				
7- Sommerfeld theory				
8- Spectra of hydrogen like ions				
9- Fine structure spectra of alkali atom				
10- Photo electric effect				
11- X-ray				

الرمز الكودي:	208ر	اسم المقرر:	مبادئ حاسب	: الفرقة:
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Topic			
Introduction to high level programming Language.			
Data types.			
Handling errors.			
Statements and tools.			
Dealing with arrays.			
Functions and subroutines.			
Dealing with files.			
Other topics (e.g. Design menu).			
الثانية	الفرقة:	اسم المقرر:	الرمز الكودي:
Topic			
Identification of human rights and its international importance			
Types of human rights			
Human rights in Islam religion and comparative legislation			
Mechanisms of human rights protection			
	الفرقة:	اسم المقرر:	الرمز الكودي:
Topic			
Calculating: Liquids and gases.			
Reporting: the origins of life.			
Describing: the universe.			
Predicting: the weather.			
Experimenting: Electricity and magnetism part 1.			
Experimenting: Electricity and magnetism part 2.			
Giving evidence: smoking, drugs, and alcohol part 1.			
Giving evidence: smoking, drugs, and alcohol part 2.			
Giving evidence: smoking, drugs, and alcohol part 3.			
Cause and effect: color, light, and sound part 1.			
Cause and effect: color, light, and sound part 1.			
Comparing the elements.			
Classifying the composition of matter part.			
الفرقة:	جيوولوجيا تركيبية وميكانيكا بيئة ترسيب - الصخور	اسم المقرر:	الرمز الكودي:

Topics

Sedimentary Environment	Introduction to depositional sedimentary environments.
	Sedimentology environments: fundamental controls and concepts sedimentary basins.
	Facies, facies associations, facies models and architectural analysis.
	Continental sedimentary environment.
	Transitional sedimentary environments.
Structure	Marine sedimentary environments
	Introduction to Structural Geology.
	Stress and Strain:
	Definition and notation of stress, Types of stress, Definition of strain.
	Elasticity and Strength of Rocks:



Failure, .state of stress, Stress-Strain Curve, Types of Rock behavior, Dilatancy (Dilation) explanation (fracture propagation), The factors affecting the Mechanical Properties and Types of Fractures

Time Dependent effect:

Definition and importance of time dependent effect.

Creep curve.

Laboratory Testing:

Geotechnical Properties:

Mechanical properties: Specimen Preparation, Compressive strength, Stress – strain curve, Shear strength, Tensile strength, Young’ modulus, Poisson’s ratio, The triaxial compression tests and determination of Mohr’s Envelope

Physical properties: Density, Porosity

Some Geotechnical Classifications of Rock Materials:

- Handin Classifications of Rock Materials.
- Stapledon Classifications of Rock Materials.

Faults:

- Fault types.
- Principle of brittle and ductile faults.
- Faults in subsurface and surface mapping.

Folds:

- The fold nomenclatures.
- Determination of fold types.
- Application of folds in structural mapping.
- Folds and faults in geological maps.
- Superimposed folds.

Shear zones:

- General properties and characteristics.

Tectonics:

- Theory of plate tectonics.
- Application to structural geology.

الفرقة:	اسم المقرر:	302 ج	الرمز الكودي:
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Stratigraphy	Topic
	Introduction, sea level changes, sedimentary cycles.
	Stratigraphic contacts and nature of vertical succession.
	Facies (Lithofacies, biofacies and microfacies).
	The basic principles of stratigraphy and Stratigraphic classification and nomenclature of various stratigraphic units.
	Lithostratigraphy, Biostratigraphy, Chronostratigraphy and Chemostratigraphy
	Various types of correlation in stratigraphy.
	The geologic time scale (Division of Archean and Proterozoic Eons) and their characteristic fossil.
	Division of Paleozoic and Mesozoic Era and their characteristic fossils.



Well Logging	Division of Cenozoic Era and their characteristic fossils.			
	Well log data recording and presentation			
	Porosity logs			
	Resistivity logs			
	Water saturation and volume of shale content evaluation models			
	Graphical interpretation of well logs			
Irreducible water saturation and reservoir performance				
الرمز الكودي: 303 ج	اسم المقرر:	جيولوجيا المياه – مساحة - تدريب حقل	الفرقة:	الثالث
Hydrology	Topics			
	Course overview; groundwater in the hydrological cycle; origin of groundwater; utilization of groundwater.			
	Physical and chemical properties of rock as water-bearing formations.			
	Vertical distribution of groundwater; types of aquifers .			
	Groundwater movement; darcy's law; determination of hydraulic conductivity.			
	Groundwater flow with flow nets; pumping tests.			
	Groundwater chemistry and contamination; groundwater sampling; sources of salinity; physical-, chemical-, biological-analyses.			
	Hydrographs; graphic representations; evaluation of groundwater.			
	Groundwater explorations; water wells .			
	Methods for drilling wells; well design and construction; well development .			
	Environmental impact on groundwater quality; groundwater overdraft and saltwater intrusion.			
Groundwater resources in Egypt .				
Plane surveying	Introduction; basic concepts, definition of Surveying and types of Surveying.			
	Types of maps; Topographic, Cadastral, Geologic, Geophysical, etc...			
	Principles of Survey Observations and Errors; types of measurements made in surveying and their units, Sources of errors and types of errors.			
	Distance Measurement.			
	Angle measurements			
	Angle measurements			
	Transverse theory; Traversing technique.			
	leveling			
Introduction to topographic Survey				
الرمز الكودي: 307 ك	اسم المقرر:	تحليلية (كمية و وزنيه وخامات)	الفرقة:	الثالثة

a: Analytical chemistry

- 1- Solvent extraction
- 2- Chromatography
- 3- Efficiency of separation
- 4- Potentiometry
- 5- Reference electrodes



- 6- Membrane indicator electrodes
 - 7- Potentiometric techniques and applications in ore analysis
 - 8- Principles of electrolysis
 - 9- Coulometry in ore analysis
- b: Electroanalytical chemistry**
- 1- Potentiometry - Reference electrodes - Indicator electrodes.
 - 2- Membrane indicator electrodes - measuring electrode potential.
 - 3- Potentiometric techniques and applications - Potentiometric titrations.
 - 4- Principles of electrolysis - Applies voltage required for electrolysis.
 - 5- Predicting electrode reactions - Current voltage behavior during electrolysis.
 - 6- Electrodeposition (Electrogravimetry - Separation at Mercury cathode.
 - 7- Coulometry - The Faraday constant - Constant potential coulometry.
 - 8- Polarography (Polarograms - Properties of the dropping mercury electrode)
 - 9- Applications of electroanalytical techniques in ore analysis.

الرمز الكودي:	338	اسم المقرر:	حاسب الى
Topics			
Introduction to database concepts			
Create tables and Identify keys, relationships between tables			
deleting with different queries1			
deleting with different queries2			
deleting with forms			
deleting with reports			
deleting with macros			
Dealing with SQL part 1			
Dealing with SQL part 2			
Dealing with SQL part 3			
Apply Visual Basic modules part1.			
Apply Visual Basic modules part 2.			
Explain and demonstrate Internet features of Access.			
الرمز الكودي:	304 ج	اسم المقرر:	الفرقة: الثالثة
Topics			
Introduction, Limits and types of metamorphism.			
Metamorphic processes.			
Metamorphic grade and facies.			
Metapelites and semi-metapelites.			
Metabasites.			
Metamorphism of carbonate rocks and marls.			
Metamorphism of ultramafic rocks.			
Rocks formed in divergent plate boundary.			
Rocks formed in convergent plate boundary.			
Rocks formed within plate.			
Different granite types.			
الرمز	305	اسم	الفرقة: الثالثة
جيوكيمياة الصخور وتحليل معدني -			



الكودي:	ج	المقرر:	الدلتا وتحت سطحية جيولوجيا	الفرقة:	
جيوكيمياء الصخور وتحليل معدني	Topics				
	Introduction & History of the earth				
	The relation between the Earth and the Universe , Interior structure of the Earth				
	Crystal Chemistry, REE (Rare Earth Elements chemistry)				
	Geochemistry of igneous rocks and age dating				
	Geochemistry of atmosphere				
	Weathering Process				
	Revisions				
	جيولوجيا الدلتا وتحت سطحية	Introduction in Sequence Stratigraphy.			
		Basics of Seismic Sequence Stratigraphic analysis.			
		High-resolution Sequence Stratigraphic analysis by using well logs.			
		Geology of Deltas (definition, types, depositional setting).			
		Geology of the Nile Delta (tectonic, structure, stratigraphy, hydrocarbon system).			
		Subsurface Geology of the Nile Delta using sequence stratigraphic analyses (case study).			
الرمز الكودي:	ج306	اسم المقرر:	جيولوجيا تصويرية	الفرقة:	
	Topics				
	Main Terminology & General Characteristics of Aerial Photographs.				
	Overlap& Sidelap and Types and characteristics of Aerial Photographs.				
	Basic Geometrical Characteristics of Aerial Photographs.				
	Quantitative Measurements, Vertical Exaggeration, Spatial & System resolution of aerial photographs.				
	Photogrammetry and the concepts of photographic scale; Image Motion (or Movement).				
	Determining horizontal ground lengths (distances, directions and angles) from photo coordinate measurements on an aerial photograph taken over varied terrain; Area Measurements from aerial photographs.				
	Principles of Aerial Photograph Interpretation, Recognition of Lithology or Rock Type on Aerial Photograph; Recognition of Structural Features on Aerial Photographs				
	Drainage Patterns and Textures; Landforms (Fluvial Landforms, Shoreline Features, Aeolian Features)				
الرمز الكودي:	ف326	اسم المقرر:	فيزياء اشعاعية	الفرقة:	
	Topics				
	The vector atom model and quantum numbers associated with it				
	Magnetic moments due to orbital and spin motions.				
	The Stern- Gerlach experiment.				
	Spin - orbit coupling and the total angular				
	Fine structure - selection rules - Intensity rules.				
X- rays.					



الفرقة : كيمياء عضوية (البتروك) اسم المقرر: 324 ك الرمز الكودي:

Topics

- 1- Introduction. What is the crude oil and natural gas.
- 2- Genesis of oil, Biogenic and inorganic theories, Oil deposits and their development.
- 3- physical properties of petroleum and its products (Specific and API gravity-Refractive index-Molecular weight-Flash and fire points-Sulphur content-Aniline point –Diesel index and Ceyane number – Octane number) Chemical constituents of oil.
- 4- Manufacturing processes (Separation process-Conversion processes- treating processes).
- 5- Distillation basics-solvent treatment- absorption – adsorption.
- 6- Cracking – Reforming..
- 7- Petroleum reforming.
- 8- Main oil products
- 9- Some Petrochemical industries.

الفرقة: الثالثة اسم المقرر: 339 ك الرمز الكودي:

Topics

- Descriptive statistics: frequency tables - measures of central tendency.
- Measures of dispersion.
- Standards sprains and kurtosis.
- Regression and correlation.
- Introduction to probability theory.
- The definition of probability.
- Probability axioms.
- Fundamental principles of harmonic analysis.
- The conditional probability and independence.
- The law of total probability and Bayes.

الفرقة: الثالثة اسم المقرر: 302 ك الرمز الكودي:

Topic

- Vocabulary Skills
- Words in context
- Roots
- Words for size
- Idioms, confusing Expressions and word pairs
- Writing Skills
- Structure and cohesion
- Description: Process and procedure
- Definitions
- Exemplification
- Classification
- Reading comprehension



Doing Science			
الرمز الكودي: 401 ج	اسم المقرر:	جيولوجيا البترول	الفرقة: الرابعة
Topic			
1. Origin of petroleum.			
2. Source rock evaluation.			
3. Primary and secondary oil migration.			
4. Oil and gas accumulation and reservoir rocks.			
5. Reservoir characters.			
6. Types of Oil & gas traps and cap rocks.			
7. Oil and gas drive mechanism.			
8. Methods of oil exploration			
9. Well logging analysis.			
الرمز الكودي: 402 ج	اسم المقرر:	جيوفيزياء	الفرقة:
Topic			
Introduction of Geophysical prospecting			
Define the principles of gravity technique, Newtonian gravitation for a point mass, density of rocks and minerals, units for gravity measurements			
Factors affecting change in gravity			
Gravity anomalies of some simple shapes			
Instrumentation and field procedures			
Gravity processing and Interpretation			
Applications of gravity technique			
Introduction of magnetic prospecting and basics of geomagnetism			
The internal component of the Earth's magnetic field			
Magnetic anomalies produced by simple geological structures			
Instrumentation and field procedures.			
Processing and Interpretation of magnetic anomalies and its application			
الرمز الكودي: 403 ج	اسم المقرر:	هندسية- اشعاعية	الفرقة:
Topic			
Introduction to radiometric.			
U, Th and K mineralization and their geochemical behavior.			
Interaction of gamma rays with matter.			
Types of detectors and radiometric instruments.			
Field survey and data processing and corrections.			
Interpretation of radiometric data and its applications.			
Uranium mineralization in Egypt.			
Radioelements exploration case study in Egypt.			
الرمز الكودي: 404 ج	اسم المقرر:	مياه ارضية تطبيقية	الفرقة:
Topics			
Course overview; review of basic physical hydrogeological concepts; hydrologic cycle, porosity, effective porosity, permeability, hydraulic conductivity, aquifer, aquitard, water table, potentiometric surface, vadose zone hydraulic head, hydraulic			



gradient, Darcy's law, applications of groundwater flow, specific yield.
Aquifer and aquitard tests; specific yield, specific retention, transmissivity, storativity, slug tests, pumping tests, tracer tests, well hydraulics, well design, piezometers.
Chemical hydrogeology; water chemistry, ion exchange, collection of water samples, major ion chemistry, presentation of results of chemical analyses.
Water quality and water quality standards; groundwater contamination.
Groundwater contamination, groundwater monitoring, groundwater restoration, groundwater management.
Surface and subsurface investigations of groundwater; geologic methods, geophysical methods of prospecting.
Remote sensing for exploration of groundwater resources.
The use of hydrogeological information to overcome problems such as; saline water intrusion in aquifers, upcoming of saline water.
The use of hydrogeological information to overcome problems such as; irrigation return flow, dewatering, rising of water table and waterlogging.
Groundwater resources in Egypt; groundwater in the Nile Delta and Nile Valley. Hydrogeology of the west and east of the Nile Delta; Groundwater in the Northwestern coast.
Groundwater in the Western Desert (Nubian Sandstone aquifer) and the Eastern Desert.
Water resources in Sinai.

الفرقة: | الرمز الكودي: 405 ج | اسم المقرر: الرواسب المعدنية في مصر – جيولوجيا الشواطئ

Topics	
Mineral Deposits	Introduction, Role of minerals in society and minerals industry.
	Classification of mineral deposits.
	Oxides and native metals.
	Sulfides.
	Alteration mineralogy
	Porphyry deposits
	Epithermal deposits
	Gold deposits in Egypt.
	Mesothermal deposits.
	Stratiform & stratabound deposits: VHMS.
	Sediment-hosted Cu deposits.
Placer deposits, residual deposits and weathering.	
Coastal Geology	Introduction to coastal geomorphology.
	Coastal geomorphology.
	Sea level fluctuations and changes.
	Wind-generated waves.
	Waves - wave theory and wave dynamics.
	Surf zone circulation.
	Coastal sediment transport.
Beach and nearshore systems.	



Coastal sand dunes.
Barrier systems.
Coral reefs and atolls.
Cliffed and rocky coasts.

الفرقة: جيولوجيا مصر اسم المقرر: 406 ج الرمز الكودي:

Topics

Introduction and general overview.
Precambrian tectonism.
The Pan-African tectonism in Egypt.
The Paleozoic stratigraphy of Egypt.
The Paleozoic tectonism of Egypt.
The Mesozoic stratigraphy of Egypt.
The Mesozoic tectonism of Egypt.
The Cenozoic stratigraphy of Egypt.
The Cenozoic tectonism of Egypt.
Geology and stratigraphy of selected areas.
Geology and structures of selected areas.
Geologic evolution of the River Nile in Egypt.

الفرقة: جيوفيزياء اسم المقرر: 407 ج الرمز الكودي:

Topics

Basic principles of geophysics and Seismic Exploration.
Elastic moduli.
Refraction method.
Reflection method.
Seismic data acquisition, processing and interpretation.

الفرقة: الرابعة اسم المقرر: 408 ج الرمز الكودي:

جيومورفولوجيا تطبيقية

Topics

Course overview; introducing Geomorphology, historical geomorphology, applications of geomorphology, review of basic concepts.
Classification of the geomorphic processes, land-forming processes and geomorphologic systems, the water cycle, the rock cycle, the biogeochemical cycle, denudation (weathering & erosion), mass movements .
Tectonic and structural landforms, plate tectonic processes, landforms related to tectonic plates, passive-, active margins landforms, volcanic & plutonic landforms.
Tectonic and structural landforms, landforms associated with folds, and drainage patterns, landforms associated with faults and joints .
Physical-, chemical-, and biological- processes weather rocks, weathering and related landforms.
Karst landscapes, what is karst, karren, cone karst, fluvial karst, subterranean karst forms, karst geomorphology and hydrology .
Fluvial landscapes, runoff, the drainage basins, running water as an agent of erosion and deposition, water constructed landforms .



Glacial and periglacial landforms, glaciers, landforms created by ice (ice erosion and deposition) and by meltwater, permafrost, ground ice .

Aeolian landscapes, wind as a geomorphic agent, wind erosion, wind transport, wind deposition, Aeolian erosional forms Aeolian depositional forms, dune formation, dune types, the problems of the erosion of soils and the activation of sand dunes .

Coastal landscapes, wave, tides, currents, coastal erosional landforms, coastal depositional landforms, beach profile, beach erosion and beach nourishment, deltas .

Geomorphology of Egypt.

الرمز الكودي: 409 ج	اسم المقرر: واستشعار مناخ قديم وجيولوجيا بحرية	الفرقة: الرابعة
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Topics	
Paleoclimat & Marine Geology	Earth interior
	Types of sediments
	Ocean's bathymetry
	Sedimentation in the ocean
	Properties of Ocean Water
	Marine ecology
	Coral reefs
	Tools of studying climatic change.
	Climate analysis using planktonic foraminifera.
	Climate analysis using benthic foraminifera.
	Ostracod as a proxy of paleoenvironment
Waves	
Remote Sensing	Introduction: The role and purpose of remote sensing.
	General physical principles electromagnetic radiation (EMR).
	Interaction of EMR with Earth surface materials.
	Satellites and Sensors.
	Digital Images.
	Image Enhancement.
	Image Classification.
	Image interpretation part 1.
	Image interpretation part 2.
	Thermal Sensing.
	RADAR Sensing.
Applications.	

الرمز الكودي: 410 ج	اسم المقرر: مقرر اختياري	الفرقة: الرابعة
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Topics	
Introduction of seismic methods and geophysics.	
Interpretation of shallow and deep seismic methods.	
Collecting digital data from seismic lines and map drawings.	
Reservoir evaluation.	
Relation between time and depth of different formations.	

الرمز الكودي: بدون	اسم المقرر: بحث ومقال	الفرقة: الرابعة
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Introduction to an essay
Choosing the subject of the essay
Main topics of the essay
Collecting materials
Revisions of the collected materials
Collection of references in the essay
Writing the essay
Revisions of the written materials
Editing of the materials
An overall revision for presentation

الرمز الكودي: 402ل	اسم المقرر:	لغة انجليزية	الفرقة: الرابعه
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Topic			
Reading			
Skimming			
Scanning			
Finding the pattern of organization			
Earthquakes			
Pollution			
The effects of oil on submarins			
Force and pressure			
Modals			
Adjective clauses			
Adverb clauses			
Noun clauses			
Conjunctions and prepositions			
Linking ideas			
Structure and cohesion			
Learner- centered approch			
Communicative approach			
Lecturing			
Discussion on groups			

الرمز الكودي: بدون	اسم المقرر:	حاسب	الفرقة: الرابعه
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Topics			
WORLD WIDE WEB (WWW) - History, Working, Web Browsers and their versions, Its functions, URLs, web sites, Domain names, Portals. Concept of Search Engines, Search engines types, searching the Web and Web Servers, client and server techniques.			
Internet basics: 1- Internet Protocols 2- Internet Services –USENET, GOPHER, WAIS, ARCHIE and VERONICA, IRCWORLD WIDE WEB			



HTML Basics: - Introduction to HTML elements, Basic tags, Attributes, creating HTML page, formatting, HTML links, List types and its tags. Creating HTML tables, adding pictures. HTML and page accessibility, colors & background.

Advance HTML: - Use of Frames and Forms in web pages, formatting web pages by using GIF, JPEG getting web and clip arts. Use of interlinks

Introduction to Dreamweaver

More Features of Dreamweaver

Different applications to build homepages using HTML and Dreamweaver