



## اللائحة الدراسية:

أ - إلزامى : المستوى الأول / السنة الأولى: يلتزم 66 وحدة موزعة على النحو التالى :  
إلزامى 66 انتقالي - اختياري -

الفصل الدراسي	الفرقة	عدد الساعات الأسبوعية			عدد الوحدات	اسم المقرر	كود / رقم المقرر
		نظري	تمرين	عملي			
الأول	الأولى	-	-	2	2	مبادئ علوم البيئة	101ب
		4	-	3	7	كيمياء عامة	104ك
		4	-	3	7	بيولوجي	101ت ط
		4	-	2	6	كهربية ومغناطيسية وضوء	105ف
		4	-	2	6	جيولوجيا عامة- معادن وصخور	103ج
		-	1	1	2	رياضيات	107ر
		-	1	2	3	لغة انجليزية	101ل
		الثاني	الأولى	4	-	3	7
4	-			3	7	علم وظائف أعضاء جسم الإنسان	102ت ط
4	-			2	6	خواص مادة وحرارة	106ف
4	-			2	6	الطبقات والحفريات	104ج
-	1			3	4	رياضيات وإحصاء	108ر
-	1			2	3	لغة انجليزية	102ل

تابع : أ - إلزامى : المستوى الثاني / السنة الثانية: يلتزم 62 وحدة موزعة على النحو التالى :  
إلزامى 62 انتقالي - اختياري -

الفصل الدراسي	الفرقة	عدد الساعات الأسبوعية			عدد الوحدات	اسم المقرر	كود / رقم المقرر
		نظري	تمرين	عملي			
الأول	الثانية	6	-	3	9	كيمياء بيئية (عضوية وغير عضوية)	209ك
		2	-	2	4	بكتريا وفطريات	204ن
		2	-	2	4	حبيبات	204ح
		2	-	2	4	جيولوجيا تركيبية وخامات معدنية	205ج
		2	-	2	4	فيزياء بيئية	209ف
		-	1	2	3	إحصاء تطبيقي	209ر
		-	1	2	3	لغة انجليزية	201ل
		الثاني	الثانية	-	-	2	2
-	-			2	2	الإنسان والبيئة	201ب
2	-			2	4	مساحة وبيئة ترسيب	206ج
2	-			1	3	فيزياء بيئية	210ف
2	-			2	4	مبادئ علم الحاسب وحزم إحصائية	210ر
4	-			3	7	طحالب وتصنيف وفلورا	205ن
4	-			3	7	كيمياء بيئية (تحليلية وفيزيائية)	210ك
-	1			2	3	لغة انجليزية	202ل



تابع : أ - إلزامى : المستوى الثالث / السنة الثالثة : يلتزم 60 وحدة موزعة على النحو التالي :  
إلزامى 60 انتقالي - اختياري -

الفصل الدراسي	الفرقة	عدد الساعات الأسبوعية			عدد الوحدات	اسم المقرر	كود / رقم المقرر
		نظري	تمرين	عملي			
الأول	الثالثة	2	-	2	4	مصادر مياه	301
		2	-	2	4	التربة وخصوبتها	302
		2	-	2	4	تلوث الهواء	303
		-	-	3	3	البيئة الاصطناعية والصحاري	304
		2	-	2	4	مصادر الطاقة	305
		4	-	3	7	النظام البيئي	306
		-	2	1	3	حاسب	بدون
-	1	2	3	لغة انجليزية	301ل		
الثاني	الثالثة	-	-	3	3	تنقيب جيوفيزيقي و بترول و استصلاح الأراضي	307
		4	-	3	7	الغلاف الحيوي و تلوث الهواء	308
		4	-	3	7	النظام البيئي	309
		2	-	2	4	صحة عامة ومناعة	310
		4	-	3	7	تحليل آلي لمكونات البيئة	311
		-	1	2	3	لغة انجليزية	302ل

تابع : أ - إلزامى : المستوى الرابع / السنة الرابعة : يلتزم 60 وحدة موزعة على النحو التالي :  
إلزامى 60 انتقالي - اختياري -

الفصل الدراسي	الفرقة	عدد الساعات الأسبوعية			عدد الوحدات	اسم المقرر	كود / رقم المقرر
		نظري	تمرين	عملي			
الأول	الثالثة	-	-	3	3	التركيب الكيميائي والنشاط الحيوي و السموم	401
		2	-	2	4	هيدرولوجيا وجيومورفولوجيا تطبيقية	402
		-	4	2	6	تلوث هواء و البيئة الاصطناعية	403
		-	2	4	6	الغلاف الجوي والمناخ / مقرر اختياري	404
		2	-	2	4	فيزياء حيوية	405
		-	-	2	2	بحث أو مقال	بدون
		-	1	2	3	لغة انجليزية	401ل
الثاني	الرابعة	4	-	2	6	تنوع نباتي و المقاومة البيولوجية للآفات	406
		-	4	4	8	الصناعة والبيئة و المخلفات	407
		-	-	2	2	مقرر اختياري	408
		-	2	2	4	جيولوجيا البيئة	409
		2	-	2	4	بيئة بحرية	410
		-	-	2	2	بحث أو مقال	بدون
		-	1	2	3	لغة انجليزية	402ل
-	2	1	3	حاسب	بدون		



## المحتوى العلمى:

### الفصل الدراسى الأول

كود المقرر : 101ب  
اسم المقرر : مبادئ علوم البيئة  
محتويات المقرر

Contents (Theoretical)
Concept of Environment, their components
Ecology and Ecosystem
Natural Cycles
Scales of pollution problems
Pollution and Pollutants
Maintenance of Biodiversity
Protectorates
Natural Resources- Uses and Abuses
Energy Resources

كود المقرر : 105ف  
اسم المقرر : كهربية ومغناطيسية وضوء  
محتويات المقرر :

Contents	
Theoretical	Practical
Nature of light	convex lenses, concave lenses, convex mirrors, concave mirros
Refraction through lenses	liquid lenses
Optical instrument	triangular prism
Dispersion	Jouly's photometer
Photometry	Ohm's law
Charge and matter, Electric current	The relation between the filament's current and the applied voltage
Electric field for a group of point charges	The sensitivity of a galvanometer
Electric field of continuous charges	The current leakage
Electric potential and applications, Condensers	Determination the resistance of a voltmeter
Coulomb's law, Electric field	The horizontal component of the magnetic field of the earth
Electric dipole and transient current	The magnetic field distribution of a small magnet
Dielectric current and Static magnetism	
Electromotive forces and induction	



كود المقرر : 104ك  
اسم المقرر : كيمياء عامة  
محتويات المقرر

Contents	
Theoretical	Practical
1- Aldehydes and Ketones	Introduction of acidic radicals
2- Acids	Detection of dilute Hcl group
3- Derivatives of acids	Detection of h2so4 group
4- Amines	Detection of miscellaneous groups
5- Nitro hydrocarbons	Scheme of general investigation of acidic radicals
6- Inorganic Chemistry	Introduction of basic radicals
7- Physical Chemistry (Gases- Liquids and solids-Solutions)	Detection of groups i, ii-a, and ii-b
	Detection of groups iii and iv
	Detection of groups v and vi
	Scheme of general investigation of basic radicals
	Detection of acidic and basic radicals of unknown salts
	Analysis of cationic radicals in a mixture
	Introduction of acidic radicals
	Detection of dilute Hcl group

كود المقرر : 103ج  
اسم المقرر : جيولوجيا عامة- معادن وصخور  
محتويات المقرر:

Contents	
Theoretical	Practical
مقدمة فى علم الجيولوجيا- نشأة الكون - التركيب الداخلى للأرض	Introduction: fundamental concepts.
التركيبات الولية و الثانوية فى الصخور الرسوبية	Forms of extrusive and intrusive igneous rocks
علم المعادن	Textures of extrusive and intrusive igneous rocks.
علم الصخور	Composition of igneous rocks
التجوية الفيزيائية و الميكانيكية و الكيمائية	Structures of igneous rocks
العوامل الهدمية و البنائية للرياح و الكتبان الرملية وأشكالها	Magma differentiation.
البحار و المحيطات -المياه الجوفية	Classification of igneous rocks.
الزلازل و البراكين ونظرية الألواح التكتونية	Evolution of igneous rocks according to the descriptions of appearance, field and microscopic studies
مقدمة فى علم الجيولوجيا- نشأة الكون - التركيب الداخلى للأرض	Methods of collecting the samples.
التركيبات الولية و الثانوية فى الصخور الرسوبية	The Arabian-Nubian Shield and the occurrence of the main igneous rocks



	Introduction of Sedimentary Rocks
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كود المقرر : 101 ت ط  
اسم المقرر : بيولوجي  
محتويات المقرر :

Contents	
Theoretical	Practical
General characters of monocot and dicot plants.	Classification the organisms in Plant kingdom according to their specific characters
Types of seeds and germination	Safety Statements of Lab. work and microscope
Different shapes of plant organs and their modifications.	external features and musculature of the experimental
Adaptation of plants to different habitats.	Anatomy of nervous system of Egyptian toad
Study the organisms' diversity.	Skeleton of Egyptian toad
Classification the organisms in Plant kingdom according to their specific characters	General histology (connective, muscular and nervous animal tissues
Study the general characters for each group in the classification using an example for each one	respiratory, endocrine, reproductive, skin, circulatory and excretory
Introduction to zoology (physiology, cytology , etc histology	
Bases of anatomy and essential physiological processes of human digestive, cardiovascular, respiratory and renal systems-Essential processes of human neurophysiology	
General and Functional cytology	
General and descriptive animal histology	
General characters of monocot and dicot plants.	

كود المقرر : 107 ر  
اسم المقرر : رياضيات  
محتويات المقرر :

Contents
Inequality part 1.
Inequality part 2.
Inequality part 3.
Limits and the continuity part 1.
Limits and the continuity part 2.
Limits and the continuity part 3.
Derivatives part 1.
Derivatives part 2.
Derivatives part 3.



Derivatives part 4.
Application of Derivatives part 1
Application of Derivatives part 2
Application of Derivatives part 3
Application of Derivatives part 4

### الفصل الدراسي الثاني

كود المقرر : 105ك  
اسم المقرر : كيمياء عامة  
محتويات المقرر:

Contents	
Theoretical	Practical
Physical Chemistry	Introduction of acidic radicals
The Phenomena of electrolysis, Faraday's laws	Detection of dilute Hcl group
Electrical Conductance, EMF.	Detection of H <sub>2</sub> SO <sub>4</sub> group
Electrod Potential, Chemical and electrical energy.	Detection of miscellaneous groups
Cell reaction and electrochemical series	Scheme of general investigation of acidic radicals
Solid state and Crystallographic systems. Inorganic Chemistry	Introduction of basic radicals
The VSEPR model	Detection of groups i, ii-a, and ii-b
V.B. Theory (Hybridization of orbitals)	Detection of groups iii and iv
Molecular geometry and Resonance	Detection of groups v and vi
M.O. Theory	Scheme of general investigation of basic radicals
Oxidation- Reduction reactions	Detection of acidic and basic radicals of unknown salts
	Analysis of cationic radicals in a mixture

كود المقرر : 102ت ط  
اسم المقرر : علم وظائف اعضاء جسم الانسان  
محتويات المقرر:

Contents	
Theoretical	Practical
Introduction to Cell Physiology.	for organ preparation Experiments
Skeletal Muscle activities and Muscle Movement.	Skeletal Muscle activities
Digestive System.	Heart activities
Food Content and Digestive enzymes.	Revision & Report Presentation
Blood Circulation System.	
Heart activities.	
Respiratory System.	



Excretory System.	
Genital System.	
Endocrinology.	
Neurology.	
Skin.	
Immune System	

كود المقرر : 106 ف  
اسم المقرر : خواص مادة وحرارة  
محتويات المقرر:

Contents	
Theoretical	Practical
Temperature and thermometers	The Joule's coefficient
Heat estimation	The specific heat of a solid using mixing method
Thermal expansion	The latent heat and temperature of an amorphous material
Change of phase	The Newton's law for cooling
Heat transfer	Searl's method in heat
Kinetic theory of gases	The simple pendulum
Units and dimensions Fundamental units - Derived units - Dimension theory and its applications Scaler and vectors -Linear motion - Planer motion - Newton`s second law	The Young's modulus of a wire
Simple harmonic motion -SimpMonent of inertia for some bodies- Simple pendulum.	The Hook's law
Hook`s law-Elasticity modulii-Relation between elasticity modulii-Stress-Strain curves.	The Stock's law of viscosity
Pressure-Pascal`s rule-Archimede`s rule-Bernoulli`s equation - Surface tension.	The Poissel's law of viscosity
Bernoulli`s equation - Viscosity Poiseuill`s formula- Stokes law.	
Units and dimensions Fundamental units - Derived units - Dimension theory and its applications Scaler and vectors -Linear motion - Planer motion - Newton`s second law	

كود المقرر : 104 ج  
اسم المقرر : الطبقات والحفريات  
محتويات المقرر:

Contents	
Theoretical	Practical
Basic principles of stratigraphy	Preservation and collection of fossils



Facies changes	Describing single specimens.
Sea level change	Ontogenic variations
Stratigraphic contacts	Evolution and fossil record
Dating geologic events, Part 1.	Protozoa, Foraminifera
Dating geologic events, Part 2.	Coelentrata
Definitions of some stratigraphic terms	Bryozoa and Porifera
Lithostratigraphic units	Brachiopoda
Allostratigraphic units	Bivalvia.
Biostratigraphic units	Gastropoda
Pedostratigraphic units	Cephalopoda.
Chronostratigraphy	Echinodermata
Correlation	

اسم المقرر : رياضيات وإحصاء  
 كود المقرر : 108ر  
 محتويات المقرر:

Contents
Descriptive statistics: frequency tables - measures of central tendency - measures of dispersion - standards sprains and kurtosis - regression and correlation, Part1.
Descriptive statistics: frequency tables - measures of central tendency - measures of dispersion - standards sprains and kurtosis - regression and correlation, Part3.
Introduction to probability theory
Definition of probability - probability axioms
Fundamental principles of harmonic analysis
Conditional probability and independence
Law of total probability and Bayes - discrete random variables
Cumulative distribution function and its properties – probability mass function and its properties
Some discrete distributions such as Bernoulli - Binomial - Poisson - geometric -hyper geometric – and continuous random variable and its distribution such as regular -exponential - standard - natural - Distribution – T Distribution – F distribution. Part 1.
Some discrete distributions such as Bernoulli - Binomial - Poisson - geometric -hyper geometric – and continuous random variable and its distribution such as regular -exponential - standard - natural - Distribution – T Distribution – F distribution. Part 2.

كود المقرر : 102ل  
 اسم المقرر : لغة انجليزية  
 محتويات المقرر:

Contents
Part Two: Vocabulary Skills
Words in context
Roots
Words for size
Idioms, confusing Expressions and word pairs
Part Three: Writing Skills





Structure and cohesion
Description: Process and procedure
Definitions
Exemplification and Classification
Part One: Reading comprehension
Doing Science
Analogy and Memory
Energy

### الفصل الدراسي الأول

كود المقرر : 209ك

اسم المقرر : كيمياء بنيوية (عضوية وغير عضوية)  
محتويات المقرر:

Contents	
Theoretical	Practical
1-Introduction to S-P block	1-Introduction to S-P block
2- Hydrogen and hydrides	2- Hydrogen and hydrides
3- Group I to VII	3- Group I to VII
4- Group 0	4- Group 0
5- Benzene and its derivatives	5- Benzene and its derivatives
6- Arenes	6- Arenes
7- Dienes	7- Dienes
8- Phenols	8- Phenols
9- Aryl Halides	9- Aryl Halides
10-Some aromatic acids	10-Some aromatic acids

كود المقرر : 209ر

اسم المقرر : إحصاء تطبيقي  
محتويات المقرر:

Contents	
Theoretical	Practical
Sampling distributions, central limit theorem, point estimation (property impartiality - property of consistency - the property of efficiency - a property sufficiently)	Sampling distributions, central limit theorem, point estimation (property impartiality - property of consistency - the property of efficiency - a property sufficiently)
methods of point estimation (by moment - by shootout largest) - confidence intervals (for mathematical mean - variance - ratio - the difference between the mean - the difference between ratio - to outside the apportionment of variance)	methods of point estimation (by moment - by shootout largest) - confidence intervals (for mathematical mean - variance - ratio - the difference between the mean - the difference between ratio - to outside the apportionment of variance)
Tests of hypotheses of statistical (arithmetic mean test - tests for differences between arithmetic mean – ratio tests - variations tests) - chi square test (for	Tests of hypotheses of statistical (arithmetic mean test - tests for differences between arithmetic mean – ratio tests - variations



good conformity (or goodness) - the independence - to homogeneity)	tests) - chi square test (for good conformity (or goodness) - the independence - to homogeneity)
Non parametric test (sign test in one sample - a test signal in double samples - signal level test - total grades test or U test - Kruskal-Wallis test or H test)	Non parametric test (sign test in one sample - a test signal in double samples - signal level test - total grades test or U test - Kruskal-Wallis test or H test)
Analysis of variance in one direction (multi T-test - range multiple test), applications related to environmental science	Analysis of variance in one direction (multi T-test - range multiple test), applications related to environmental science
Revision	Revision

كود المقرر : 209ف  
اسم المقرر : فيزياء بينية  
محتويات المقرر:

Contents	
Theoretical	Practical
Structure of the nucleus- Isotopes-Radioactivity- Exponential decay- Decayproducts and radioactive	حيود الليزر
Nuclear reactions and transmutations- Nuclear force and nuclearstability- Nuclear fissions	محزوز الحيود
Nuclear reactors- Fusion reaction- Radiation units- Radiation damage.	ميكروويف (استقطاب+الموجات الموقفة)
The primrdial fireball-Galaxies and stars- Stellar evolution-The expandinguniverse, Age determinate	حلقات نيوتن
The Bohr atom-Energy levels-Bohr-Stoner scheme for building up atoms -Elliptical orbits.	ميكروويف (التداخل+الحيود)
Wave mechanics-The spectrum of sodium-Resonance radiation- metastablestate-optical pumping.	جهاز أبي
Stimulated emission-laser design-The ruby laser-Tha helium - neon laser- cocavemirror.	الدوران النوعي
Brewester's windows-The carbon dioxide laser-Resonant cavities- Coherencelength, Frequency doubling.	
Other lasers,laser safety,The speckle effect-laser applications	



كود المقرر : 204ح  
اسم المقرر : حبيات  
محتويات المقرر:

Contents	
Theoretical	Practical
Basis of chordates taxonomy, Cephalochordata	Basis of chordates taxonomy, Cephalochordata
Characters and taxonomy of Agnatha	Characters and taxonomy of Agnatha
Characters and taxonomy of Chondrichthyes	Characters and taxonomy of Chondrichthyes
Characters and taxonomy of Osteichthyes	Characters and taxonomy of Osteichthyes
Characters and taxonomy of Amphibia	Characters and taxonomy of Amphibia
Characters and taxonomy of Reptilia	Characters and taxonomy of Reptilia
Characters and taxonomy of Aves	Characters and taxonomy of Aves
Characters and taxonomy of Mammalia	Characters and taxonomy of Mammalia

كود المقرر : 205ج  
اسم المقرر : جيولوجيا تركيبه وخامات معدنية  
محتويات المقرر:

Contents	
Theoretical	Practical
Introduction of structure Geology	Introduction of structure Geology
Primary and secondary structure	Primary and secondary structure
Stress and Strain	Stress and Strain
Faults	Faults
Folds	Folds
Fractures, foliation and lineation	Fractures, foliation and lineation
Stereographic projection, Revision	Stereographic projection, Revision

كود المقرر : 204ن  
اسم المقرر : بكتريا وفطريات  
محتويات المقرر:

Contents	
Theoretical	Practical
Introduction to bacteriology, the bacterial cellshapes, sizes and arrangement,	Introduction to bacteriology, the bacterial cellshapes, sizes and arrangement,
Chemical composition of bacterial cell- Bacterial nutrition.	Chemical composition of bacterial cell- Bacterial nutrition.
Bacterial end spore, Reproduction of bacteria- Bacterial growth.	Bacterial end spore, Reproduction of bacteria- Bacterial growth.
Physical and chemical factorsaffecting the bacterial growth- Importance of bacteria.	Physical and chemical factorsaffecting the bacterial growth- Importance of bacteria.
Introduction to Mycology - Reproduction and life cycle of fungi.	Introduction to Mycology - Reproduction and life cycle of fungi.
Fungal growth - Fungal nutrition.	Fungal growth - Fungal nutrition.
Classification of fungi- Importance and utilization of fungi.	Classification of fungi- Importance and utilization of fungi.



كود المقرر : 201ل  
اسم المقرر : لغة انجليزية  
محتوى المقرر:

Contents
Acids. (Reading)
Matter and Volume. (Reading)
Force and Pressure. (Reading)
Modals. (Grammar)
Pronoun Determiners. (Grammar)
Relative Clauses. (Grammar)
Adjectives and Adverbs. (Grammar)
Conjunctions and Prepositions (Grammar)
Writing Instructions. (Writing)
Describing. (Writing)
Listing Characteristics. (Writing)
Skimming. (Reading)
Scanning. (Reading)
Finding the Pattern of Organization. (Reading)

كود المقرر : بدون  
اسم المقرر : حقوق الإنسان والمبادئ القانونية العامة  
محتويات المقرر:

Contents
مقدمة تشمل التعريف بحقوق الإنسان السياسية والاقتصادية والاجتماعية
فصل يشتمل التعريف بحقوق الإنسان وأهميتها الدولية.
صور حقوق الإنسان.
آليات حماية حقوق الإنسان علي المستوي الداخلي.
الحقوق الاقتصادية والاجتماعية للإنسان.
في حق الإنسان في الشورى.
الحقوق و الضمانات المقررة في مرحلة جمع الاستدلالات والتحقيق الابتدائي .
جزاء مخالفة حقوق و ضمانات المتهم بجريمة.
دراسة حالة-جزء اول
دراسة حالة- جزء ثانى
مراجعة عامة



## الفصل الدراسي الثاني

كود المقرر : 201ب  
اسم المقرر : الإنسان والبيئة  
محتويات المقرر:

Contents
Man-nature interaction
Natural and man-made changes in environment and disasters
Population and environment
Water quality, pollution and treatment
Soils and Land Contamination
Radioactive pollution
Sustainable development and Environmental Management
Environment and public health
Environmental policies, ethics and awareness

كود المقرر : 206ج  
اسم المقرر : مساحة وبيئة ترسيب  
محتويات المقرر:

Contents	
Theoretical	Practical
Course overview; groundwater in the hydrological cycle; origin of groundwater; utilization of groundwater.	Course overview; groundwater in the hydrological cycle; origin of groundwater; utilization of groundwater.
Physical and chemical properties of rock as water-bearing formations.	Physical and chemical properties of rock as water-bearing formations.
Vertical distribution of groundwater; types of aquifers .	Vertical distribution of groundwater; types of aquifers .
Groundwater movement; Darcy's law; determination of hydraulic conductivity.	Groundwater movement; Darcy's law; determination of hydraulic conductivity.
Groundwater flow with flow nets; pumping tests., review.	Groundwater flow with flow nets; pumping tests., review.
Groundwater chemistry and contamination ؛ groundwater sampling; sources of salinity; physical-, chemical -, biological-analyses.	Groundwater chemistry and contamination ؛ groundwater sampling; sources of salinity; physical-, chemical -, biological-analyses.
Hydrographs; graphic representations; evaluation of groundwater.	Hydrographs; graphic representations; evaluation of groundwater.
Groundwater explorations; water wells .	Groundwater explorations; water wells .
Methods for drilling wells; well design and construction; well development .	Methods for drilling wells; well design and construction; well development .
Environmental impacts on groundwater quality ؛ groundwater overdraft and saltwater intrusion.	Environmental impacts on groundwater quality ؛ groundwater overdraft and saltwater intrusion.
Groundwater resources in Egypt, Review and open discussions	Groundwater resources in Egypt, Review and open discussions



كود المقرر : 205  
اسم المقرر : طحالب وتصنيف وفلورا  
محتويات المقرر:

Contents	
Theoretical	Practical
Classification of algae, Different groups of algae, Algal cell structure.	Classification of algae
Algal life cycles and types of reproduction.	Different groups of algae
Phytoplankton- Benthos.	Plant Taxonomy
Algal nutrition and utilization of algae.	Types and Structure of flowers,
Principals of Plant Taxonomy.	Inflorescence and fruits
Principals of Plant Taxonomy	Families of Monocots
Types and structure of flowers, inflorescence and fruits.	Families of Dicots
Classification of algae, Different groups of algae, Algal cell structure.	Characteristics of the Egyptian Flora, Flora of the Mediterranean Region
Algal life cycles and types of reproduction.	Flora of the Desert Region, Flora of the Red Sea Region
Phytoplankton- Benthos.	Flora of the Nile Region, Flora of the Sinai, Flora of the Jebel Elba Region
Algal nutrition and utilization of algae.	Flora of the Oases,
Types and structure of flowers, inflorescence and fruits.	Uses and value of the Egyptian Flora
Pollination and fertilization.	Human Impacts on the flora,
Representative families of Monocots.	Methods of Egyptian flora Conservation.

كود المقرر : 210  
اسم المقرر : مبادئ علم الحاسب وحزم إحصائية  
محتويات المقرر:

Contents	
Theoretical	Practical
مقدمة في لغات البرمجة ومفومها	مقدمة في لغات البرمجة ومفومها
لغة البرمجة باستخدام الفيجيول بيسك دوت نت	لغة البرمجة باستخدام الفيجيول بيسك دوت نت
دراسة جمل الفيجيول بيسك دوت نت	دراسة جمل الفيجيول بيسك دوت نت
دراسة الادوات و اهم خصائصها في الفيجيول بيسك دوت نت	دراسة الادوات و اهم خصائصها في الفيجيول بيسك دوت نت
دراسة الاحداث في الفيجيول بيسك دوت نت	دراسة الاحداث في الفيجيول بيسك دوت نت
كيفية تصميم قوائم في الفيجيول بيسك دوت نت	كيفية تصميم قوائم في الفيجيول بيسك دوت نت
تصميم الدوال و البرامج الفرعية	تصميم الدوال و البرامج الفرعية
استخدام برنامج الاكسيل كحزمة احصائية	استخدام برنامج الاكسيل كحزمة احصائية
التدريب على استخدام دوال الاكسيل الحصائية في حل مشاكل احصائية	التدريب على استخدام دوال الاكسيل الحصائية في حل مشاكل احصائية
استخدام التحليل الاحصائي بواسطة برنامج الاكسيل و الحكم على النتائج	استخدام التحليل الاحصائي بواسطة برنامج الاكسيل و الحكم على النتائج
استخدام برنامج SPSS في التحليل الاحصائي	استخدام برنامج SPSS في التحليل الاحصائي



كود المقرر : 210ف  
اسم المقرر : فيزياء بيئة  
محتويات المقرر:

Contents	
Radioactive isotopes and their Physical and Biological uses.	تعيين معامل الصلابة لسلك بطريقة سيرل
X-ray - Production – Detection.	تعيين معامل الصلابة لسلك بطريقة بندول اللي
Absorption of Radiation by human body and exposure.	تعيين معامل ينح لقضيب معدني معلق من طرف واحد (انحناء القضبان أ)
Cosmic rays.	تعيين معامل ينح لقضيب معدني معلق من طرفين (انحناء القضبان ب)
Reactorandenergies systems.	تعيين عجلة الجاذبية باستخدام الوسادة الهوائية
Revision	تعيين عجلة الجاذبية باستخدام البندول المركب الوصلات الثنائية

كود المقرر : 202ل  
اسم المقرر : لغة انجليزية  
محتويات المقرر:

Contents	
Acids. (Reading)	
Matter and Volume. (Reading)	
Force and Pressure. (Reading)	
Modals. (Grammar)	
Pronoun Determiners. (Grammar)	
Relative Clauses. (Grammar)	
Adjectives and Adverbs. (Grammar)	
Conjunctions and Prepositions (Grammar)	
Writing Instructions. (Writing)	
Describing. (Writing)	
Listing Characteristics. (Writing)	
Skimming. (Reading)	
Scanning. (Reading)	
Finding the Pattern of Organization. (Reading)	





## الفصل الدراسي الأول

كود المقرر : 301ب

اسم المقرر : مصادر مياه

محتويات المقرر:

Contents	
Theoretical	Practical
Introduction, properties, forms, distribution of water, and hydrologic cycle.	Introduction, collection, preservation of water samples
Watershed, types, management, and processes.	Determination of pH and electrical conductivity
Types of water use, meeting water demand in future.	Determination of total alkalinity in water sample (drinking water).
Sources of water contamination.	Determination of acidity in water.
Water quality and Potable water treatment (traditional and advanced technique).	Determination of turbidity in water.
Aluminum and chloride.	Determination of total hardness in water.
Copper and color.	Determination of calcium hardness and calcium ion in water.
Hydrogen sulphide and hardness.	Determination of magnesium hardness and magnesium ion in water.
pH and iron.	Determination of chloride in water.
Sulphate and sodium.	Determination of sulphide.
Taste and odor.	Determination of total solids in water.
Manganese and dissolved oxygen	Determination of nitrate by cadmium reduction method.
Temperature and TDS.	Monitoring of natural water systems and making comment on the results.
Turbidity and zinc.	Review

كود المقرر : 302ب

اسم المقرر : التربة وخصوبتها

محتويات المقرر:

Part I: Theoretical (Lectures)	Part II: Practical
Introduction of Soil Science; Pedology and Edaphology.	Determination of soil grain size (texture) Rotap shaker by soil
Soil Formation, Soil Genesis, Soil Taxonomy.	Determination of moisture content of soil
General properties of soil: Physical, Soil Texture, Porosity, Chemical, Anion contents.	Determination of soil porosity
Biogeochemical cycles: Carbon cycle, Nitrogen cycle, Phosphorus cycle, Sulfur cycle	Determination of soil water holding capacity by Hiljard-pan box
Evaluation of Soil Fertility. Soil Contamination	Determination of chemical parameters of soil (pH, salinity, CaCO <sub>3</sub> , CaHCO <sub>3</sub> , organic carbon, total phosphorus, Chlorides) by pH, TDS meter and spectrophotometer.





كود المقرر : 303  
اسم المقرر : تلوث الهواء  
محتويات المقرر:

Contents	
Part I: Theoretical (Lectures)	Part II: Practical
Definitions of Air contaminants and pollution	Instrumental collecting techniques for air pollution
Sources and types of gaseous air pollution.	Microscopic identification of particulates
Physical and chemicals properties of gaseous pollutants.	Determination of pollen grains in the air
Sinking of gaseous pollutants	Determination of settleable particulates in the air
Primary and secondary particulates and Particles composition.	Determination of suspended particulates in the air by personal sampler
Physical and chemical processes for particleformation.	Ideal gas and Dalton law
Particulates sources and removal.	Determination of ammonium salts in atmospheric suspended particulates by spectrophotometer.
Behavior of particles in the atmosphere.	Determination of sulfates in atmospheric suspended particulates by turbidimeter.
physical and chemical fundamentals laws of gasesbehavior.	Determination of nitrate in atmospheric suspended particulates by spectrophotometer.
Indoor air pollution.	Determination of nitrite in atmospheric suspended particulates by spectrophotometer.

كود المقرر : 304  
اسم المقرر : البيئة الاصطناعية والصحاري  
محتويات المقرر:

Contents	
Man-Made Environment	Deserts
Concepts of man-made environments	Introduction of deserts.
Agro ecosystems	Types of deserts.
EIA of Aswan high dam	Ecology of arid lands.
Lake Nasser and the River Nile branches	Desert features.
Maritimes ports in Egypt.	Biology of deserts.
Human interference with estuarine environment.	Desert and adaptation.
Cages and fresh water.	Deserts of Egypt, eastern desert.
Artificial marine coral reefs.	Deserts of Egypt, western and Red Sea
Mega national projects in Egypt.	Control of desertification.
Aforestation .	Management of deserts.
Desertification.	Revision.
Environmental and land use planning	
Planning tools (EIA, Cost benefit analysis, Overlay mapping).	



كود المقرر : 305  
اسم المقرر : مصادر الطاقة  
محتويات المقرر:

Contents	
Part I: Theoretical (Lectures)	Part II: Practical
Types of traditional energy sources.	Solar radiation and light spectrum
Disadvantage of traditional energy sources.	Solar heater
Types of renewal energy sources.	cooling during hot summer
Solar energy.	sea water desalination
Wind energy generators.	drying and food cooking
Energy produced from water resources.	Solar radiation and electricity generation
	Solar radiation and light spectrum
	Solar ovens
	Manil's system
	Thermal machines

كود المقرر : 306  
اسم المقرر : النظام البيئي  
محتويات المقرر:

Contents	
Theoretical	Practical
Ecology, definitions and basics.	Characterization and analysis of different environmental components.
Forest Ecology & Conservation	Determination of Dissolved Oxygen (DO) in water.
Sustainable Ecosystem, Matter and Cycles of Matter	Determination of Biological Oxygen Demand (BOD) in water
Endogenic and Exogenic Cycles	Determination of Chemical Oxygen demand (COD) in water.
Biodiversity, Genetic diversity and Species Diversity	Determination of nitrite, nitrates, total phosphorus in water.
Ecological Diversity, Functional diversity and Threats to Biodiversity	Determination of total phosphorus in soil.
Biodiversity Hotspots around the Globe, Why is biodiversity important?	Flocculation test (Jar test).
Energy path and Trophic levels	
Food chain and food web	
Dynamics of population growth	
Ecosystem management.	



كود المقرر : بدون  
اسم المقرر : حاسب  
محتويات المقرر:

Contents	
مقدمه عن لغات البرمجه الموجهه نحو الأهداف	
لغة البرمجه باستخدام البيسك المرئي	
دراسة تفصيلية لجمل البيسك المرئي	
دراسة الحلقات التكرارية في لغة البيسك المرئي	
استخدام الدوال الداخلية في لغة البيسك المرئي	
استخدام الدوال الخارجية في لغة البيسك المرئي	
استخدام البرامج الفرعية في لغة البيسك المرئي	
مقدمه عن طريقة برمجة الملفات في لغة البيسك المرئي	
الملفات التتابعية.	
الملفات العشوائية	
كيفية الرسم graphic في لغة البيسك المرئي.	

كود المقرر : 301ل  
اسم المقرر : لغة انجليزية  
محتويات المقرر:

Contents	
Part One: Reading comprehension.	
Part Two: Vocabulary Skills	
Words in context	
Roots	
Words for size	
Idioms, confusing Expressions and word pairs	
Part Three: Writing Skills	
Structure and cohesion	
Description: Process and procedure	
Definitions	
Exemplification	
Classification	
Revision	



## الفصل الدراسي الثاني

كود المقرر : 307ب

اسم المقرر : تنقيب جيوفيزيقي و بترول و استصلاح الأراضي  
محتويات المقرر:

Contents	
Geophysics and Seismic Exploration	Land Reclamation
Basic principles of geophysics and Seismic Exploration.	Types of soil defects
Elastic moduli .	Topographical defects
Refraction method .	Physical defects
Seismic data acquisition, processing and acquisition, processing and interpretation.	Chemical defects, soil salinity.
	Chemical defects, soil acidity.
	Chemical defects, sodic soil.
	Biological defects
	Methods reclamation.
	Methods of land planning
	Tools of land planning
	Land usages

كود المقرر : 308ب

اسم المقرر : الغلاف الحيوي و تلوث الهواء  
محتويات المقرر:

Contents	
Theoretical	Practical
<b>Part I (Biosphere)</b>	
The Biosphere and Connectivity of the Spheres	Determination of sulfur dioxide in the air by spectrophotometer.
Biodiversity; Threats and sustainability	Determination of sulfur dioxide in plant tissues by using turbidimeter.
Environmental Reservoirs	Measurement of smoke
Lifetimes	Determination of heavy metal
The Biogeochemical Cycle of Nitrogen	
Biogeochemical Cycle of Lead	
Behaviour of Long-Lived Organic Chemicals in the Environment	
Behaviour of Long-Lived Organic Chemicals in the Environment	
The Major Carbon Reservoirs	
The Global Carbon Cycles	
<b>Part II (Air pollution)</b>	
Air quality and emissions assessment, regulation	Determination of nitrogen dioxide gas by



and public policy	"Arsenite Method" by spectrophotometer.
Health effects	Determination of ammonia gas by "Indophenol Method" by spectrophotometer.
Cause-effect relationships	Detection of ammonia by using Dragar Gas Detector
Impact of pollutants on human body	Detection of hydrocarbons by using Dragar Gas Detector
Health effects of regulated air pollutants	Determination of free chlorine content (Methyl Orange Method) by spectrophotometer.
Hazardous air pollutants	
Role of health effects in regulatory air pollutants	
Welfare effects; Plants and plant injury Symptom patterns of phototoxic pollutants	
Noise pollution	
Air quality management	
Emission standards strategy	

كود المقرر : 309ب  
اسم المقرر : النظام البيئي  
محتويات المقرر

Contents	
Theoretical	Practical
Environmental systems	Characterization and analysis of different environmental components
Importance of boundaries and scales	Determination of net productivity.
Four main Environmental systems and their interrelation.	Determination of aggressive index (AI) and saturation index (SI).
Importance of flows, cycles and structures in Environmental systems.	Determination of pesticide residues in water.
Importance of equilibrium, resilience threshold and lags	Determination of iron concentration in some food products.
The principal components and dynamics of biogeochemical cycles.	Determination of Calcium concentration in some food products
The role of four major kinds of organic compounds in living cells.	Revision
The energy and the difference between kinetic and potential energy.	



كود المقرر: 310  
اسم المقرر : صحة عامة و مناعة  
محتويات المقرر:

Contents	
Theoretical	Practical
Identification and lymphatic system	Differential count WBCs in man
Lymph and Principles and Historical background of immunity	Differential count WBCs in mouse
Immunity and genetics	Differential count of immune cells
Types of immunity	Determination of viability of peritoneal exudate
Determination of innate immunity ,immune response, and lymphoid tissues	Determination of phagocytic cells
Complement system	Revision
Introduction to Public Health and Epidemiology	
Types of Preventions.	
Determinants of Health.	
Classification of Health Problems.	
Infectious Diseases.	
Non-infectious Diseases.	
Diseases Control.	
Public Health System Improvement.	

كود المقرر : 311  
اسم المقرر : التحليل الألى لمكونات البيئة  
محتويات المقرر:

Contents	
Theoretical	Practical
<b>Part I</b>	Determination of sulfate in water by "Turbidimetric Method "
Methods of describing pollutant concentration	Determination of O-phosphate in water by "Stannous Method "
Gas concentration measurement	Determination of fluoride in water by "SPADNS Method"
Quality control	Determination of phenolic compounds in aqueous samples by" Amino antipyrine Method"
Particle measurement methods	Determination of Chlorophylls : Spectrophotometric Method
Measurement of coarse particle deposition	Determination of silica in water by "Molybdosilicate Method"
Emission measurement from stationary sources	Determination of iron in water by "Phenanthroline Method"
Analysis of an air quality data set	The extraction of pigments from Spanish ؛



	Column Chromatography
Chemical analysis of water and wastewater	Determination of heavy metals
Analysis of wastes and solids	Determination of nitrate, Cadmium-Reduction Method
<b>Part II</b>	Determination of total nitrogen ,Persulfate Method
Electromagnetic radiation	Thin Layer Chromatography (TLC).
Spectrophotometer components	
Ideal situation for UV-Vis spectrophotometric analysis	
Qualitative and quantitative applications of spectrophotometry	
Solvent extraction	
Column Chromatography	
Efficiency of separation	

كود المقرر : 302  
اسم المقرر : لغة انجليزية  
محتويات المقرر:

Contents
Part Two: Vocabulary Skills
Words in context
Roots
Words for size
Idioms, confusing Expressions and word pairs
Part Three: Writing Skills
Structure and cohesion
Description: Process and procedure
Definitions
Exemplification
Classification
Part One: Reading comprehension. Part 1
Part One: Reading comprehension. Part 2
Revision



## الفصل الدراسي الأول

كود المقرر : 401ب

اسم المقرر : التركيب الكيميائي والنشاط الحيوي و السموم

محتويات المقرر:

Contents
Chemotherapeutic organic compounds and their bioactivities.
Some vitamins, antibiotics and natural products and their bioactivities
Chemical conversions by microorganisms and enzymes, in addition to their environmental applications.
Concepts of toxicology, absorption, distribution and excretion.
Toxicants effect
Biotransformation of toxins and mechanism of action
Modifying factors of toxic effects

كود المقرر : 402ب

اسم المقرر : هيدرولوجيا وجيومورفولوجيا تطبيقية

محتويات المقرر:

Contents	
Theoretical	Practical
Groundwater	Groundwater
Subsurface water	Subsurface water
Types of Aquifers	Types of Aquifers
Groundwater	Groundwater
Subsurface water	Subsurface water
Types of Aquifers	Types of Aquifers
Aquifers and confining beds	Aquifers and confining beds
Artesian wells	Artesian wells
Interaction between stream and aquifer	Interaction between stream and aquifer
Groundwater charge and discharge	Groundwater charge and discharge
Aquifer characteristics	Aquifer characteristics
Hydraulic conductivity	Hydraulic conductivity
Groundwater withdrawal	Groundwater withdrawal





كود المقرر : 403 ب  
اسم المقرر : تلوث هواء و البيئة الاصطناعية  
محتويات المقرر:

Contents	
Theoretical	Practical
<b>Part I : Air pollution</b>	
Meteorology for air pollution	Ceramic industry
Horizontal atmospheric motion	Glue industry
Vertical motion in the atmosphere	Field trip to spray booth in Damietta
Wind velocities and directions	Welding
Inversions, Fumigatives stagnations and meteorological Forecasts	Description of the industry of some case studies of industries (Fertilizers, Textile)
Atmospheric dispersion and modeling	
<b>II Anthrosphere</b>	
Anthrosphere and its components	مدينة دمياط الجديدة (تحديد ومناقشة وحل المشاكل البيئية)
Technology and the anthrosphere	ميناء دمياط (تحديد ومناقشة وحل المشاكل البيئية)
Infrastructure	ترعة السلام (تحديد ومناقشة وحل المشاكل البيئية)
Dwellings	بحيرة المنزلة (تحديد ومناقشة وحل المشاكل البيئية)
Transportation	(زيارة الي محطة الوقود بدمياط الجديدة) (تحديد ومناقشة وحل المشاكل البيئية)
Communications	السد العالي (تحديد ومناقشة وحل المشاكل البيئية)
Food and Agriculture	بحيرة ناصر (تحديد ومناقشة وحل المشاكل البيئية)
Manufacturing	اجراءات مقترحة لحماية سواحل البحر الاحمر
Effects of the anthrosphere on Earth	
Integration of the anthrosphere into the total environment	
The Anthrosphere and Industrial Ecology	

كود المقرر : 404 ب  
اسم المقرر : الغلاف الجوى والمناخ / مقرر اختياري  
محتويات المقرر:

Contents		
الغلاف الجوى والمناخ	مقرر اختياري (Protectorates)	Practical
Atmospheric components and structure	Introduction of Natural Resources.	Basic of atmospheric science
Physical characteristic of the atmosphere	Types of Protectorates.	Measurement of temperature



Energy transfer in the atmosphere	Environmental Laws	Measurement of humidity
Earths radiation budget	Management of Protectorates.	Measurement of pressure
Atmospheric mass transfer , meteorology and weather	Maintenance of Protectorates.	Measurement of wind speed and direction
Inversions and air pollution	Case Study 1. Jabel Albah.	Measurement of precipitation
Global climate and microclimate	Case Study 2. Kobet Elhassanah.	Measurement of radiation
Climate and climatic changes	Case Study 3. Ashtoom Algameil.	Measurement of evaporation
		Field trip to weather station

كود المقرر : 405ب  
اسم المقرر : فيزياء حيوية  
محتويات المقرر:

Contents	
Theoretical	Practical
Introduction .	alpha, beta and gamma counts
Electrode technique . part 1	Beta efficiency calculation
Electrode technique . part 2	Absorption factor of gamma rays
Fundamentals of electrochemistry . part 1	Dead time calculations
Fundamentals of electrochemistry . part 2	Nuclear simulation
Resting potential .part 1	Reverse Square law
Resting potential. part 2	alpha, beta and gamma counts
Action potential . part 1	Beta efficiency calculation
Action potential . part 2	Absorption factor of gamma rays
Surface potentials .	Dead time calculations
Physical properties of living cells . part 1	Nuclear simulation
Physical properties of living cells . Part 2	Reverse Square law
Bio mechanics .part 1	alpha, beta and gamma counts
Bio mechanics .part 2	Beta efficiency calculation

كود المقرر : 401ل  
اسم المقرر: لغة انجليزية  
محتويات المقرر:

Contents
Reading
Skimming
Scanning
Finding the pattern of organization
Earthquakes



Pollution
The effects of oil on submarines
Force and pressure
Modals
Adjective clauses
Adverb clauses
Noun clauses
Conjunctions and prepositions
Linking ideas and Structure and cohesion

### الفصل الدراسي الثاني

كود المقرر : 406ب

اسم المقرر : تنوع نباتي والمقاومة البيولوجية للآفات  
محتويات المقرر:

Contents		
Biological Pests Control	Plant Diversity	Practical
the definition of biological control	Introduction to the concepts of biodiversity.	Listing of species
Types of the organisms used to biological control.	Definition of plant diversity.	Determination of optimum quadrat size
Methods of biological control.	Types of plant diversity	Species variation
Steps of the biological control of some crop pests.	Molecular basis of plant diversity: its importance and conservation	Similarity of plant communities
Alternative methods of biological control.	Environmental Stresses on plant diversity , Designation and management of historical and wild-life protected areas (national parks).	Plant diversity
Advantages of biological control.	Terrestrial ecosystems and plant diversity.	Plants classification
Disadvantages of biological control.	Marine ecosystem and plant diversity.	Analytic and synthetic characters
Revision.	Mountain reserves, wetland protected areas and areas of special historical interest.	Sex diversity in plants
	Diversity in wild plants and Types of biodiversity	Look of plant
	Areas of special historical interest.	Pests classification
	Plant diversity and biosphere reserve.	Benefit pests
	Importance of plant diversity.	Agriculture pests
	Revision.	Harmful pests



كود المقرر : 407  
اسم المقرر : الصناعة والبيئة و المخلفات  
محتويات المقرر:

Contents		
Industry and Environment	Wastes	Practical
Concepts of different industrial wastes and its characterizations	The definition of wastes.	Concepts and characteristics of different types of waste waters.
Petroleum refining industry and smelting of non-ferrous ores	Types of wastes.	Wastewater treatment: [Biological treatment: Aerobic COD & SS removal "Conventional Wastewater Treatment (WWT) plant", essential terms in Biological WWT and Nitrogen removal from wastewater
Manufacture of iron and steel and Chemical works and other industrial processes	Generation sources of wastes.	Anaerobic digestion and tertiary treatment
Electric power generation and Control of motor vehicle emissions	Definition of waste management.	The biodegradability of wastewater.
Control of gaseous pollutants and Control of particulate pollutants	Methods of waste treatments.	Advanced WWT techniques & case studies MF, UF, NF, MBR,...
Description of the industry of some case studies of industries ( Fertilizers, Textile, Dairy, Paints- Pulp and Paper- Ceramics - Beverage- Fruits and Vegetables industries.)	Physical treatment methods.	Clean technology for minimizing waste.
Environmental and health impacts of pollutants of some case studies of industries ( Fertilizers, Textile, Dairy, Paints- Pulp and Paper- Ceramics- Beverage- Fruits and Vegetables industries ).	Chemical treatment methods	General concepts of Solid Waste Management (SWM).
Egyptian Laws and regulations of some industries.	Biological treatment methods.	Characteristics of solid wastes.
Pollution abatement measures of some case studies of industries	The concept of integrated waste management.	- Methods of SWM.
The principles of occupational safety.	Revision.	Biodegradation of solid wastes.
		Control of motor vehicle



		emissions
		Control of gaseous pollutants and Control of particulate pollutants
		Description of the industry of some case studies of industries (Fertilizers, Textile, Dairy, Paints- Pulp and Paper- Ceramics- Beverage- Fruits and Vegetables industries)
		Environmental and health impacts of pollutants of some case studies of industries (Fertilizers, Textile, Dairy, Paints- Pulp and Paper- Ceramics- Beverage- Fruits and Vegetables industries)
		Egyptian Laws and regulations of some case studies of industries ( Fertilizers, Textile, Dairy, Paints- Pulp and Paper- Ceramics- Beverage- Fruits and Vegetables industries)
		Pollution abatement measures of some case studies of industries ( Fertilizers, Textile, Dairy, Paints- Pulp and Paper- Ceramics- Beverage- Fruits and Vegetables industries)
		The principles of occupational safety
		Field training and writing reports presentation

كود المقرر : 408ب  
اسم المقرر : مقرر اختياري (Atmospheric chemistry)  
محتويات المقرر:

Contents
Atmospheric chemistry, definitions and principles
Atmospheric chemical transformation
Role of solar radiation in atmospheric chemistry
Gas phase chemical reaction pathways
Photoabsorption of solar radiation
atmospheric chemistry of troposphere



Role of hydrocarbons
Heterogeneous reactions
Scavenging and removal from the atmosphere

كود المقرر: 409ب  
اسم المقرر: جيولوجيا البيئة  
محتويات المقرر:

Contents	
Theoretical	Practical
Introduction to environmental geology	Soil
Earth resources.	Weathering
Earth hazards, Volcanoes.	The coast
Earth hazards, Earthquake.	Waves
Earth hazards, Tsunami	The ocean ecosystem
Earth hazards, Typhoons.	Currents
Environmental pollution.	Coastal erosion
Global issues.	Soil
Revision	Weathering

كود المقرر: 410ب  
اسم المقرر: بيئة بحرية  
محتويات المقرر:

Contents	
Part I: Theoretical (Lectures)	Part II: Practical
Introduction to Oceanography	Marine ecosystem : components
General properties of Marine environments.	Biological productivity in marine ecosystem
Types of Marine Environments.	Geochemical cycles
Shoreline Environments.	Ecology of surface water and deep sea
Phytoplanktons.	Ecology of coastal habitats
Zooplanktons.	Ecological adaptations of marine organisms
Benthos.	Ecology of Red sea habitat part
Introduction to Coral Reefs.	Ecology of Mediterranean sea habitat
Types of Coral Reefs.	
Marine interrelationships.	
Marine Pollutions.	
Management and Maintenance of Marine Environments.	



كود المقرر : بدون  
اسم المقرر : حاسب  
محتويات المقرر :

Contents	
Theoretical	Practical
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.	Deal with package software and Descript data and variables
Internet basics.	Compute the estimator Statistic value
Internet Protocols 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.	Correlations analysis
Advance HTML: Frames and Forms in web pages, formatting web pages by using GIF, JPEG getting web and clip arts.	Regression analysis
Introduction to Dreamweaver	Multivariate Statistics(confidence intervals)
More Features of Dreamweaver	Multivariate Statistics (hypotheses)
Applications on 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.	Non-parametric Testing
Applications on Internet basics:	Using an opp language programming to compute the statistical and probability laws
Applications on Internet Protocols :Internet Services – USENET, GOPHER, WAIS, ARCHIE and VERONICA, IRCWORLD WIDE WEB	
Applications on 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 and background.	
Applications on 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	
Applications on Dreamweaver	

كود المقرر: 402ل  
اسم المقرر: لغة انجليزية  
محتويات المقرر:

Contents
Reading
Skimming
Scanning
Finding the pattern of organization
Earthquakes
Pollution
The effects of oil on submarines
Force and pressure
Modals
Adjective clauses
Adverb clauses
Noun clauses
Conjunctions and prepositions
Linking ideas and Structure and cohesion

الفرقة الرابعة: الفصل الدراسي الأول/ الفصل الدراسي الثاني (طوال العام)  
كود المقرر: بدون  
اسم المقرر: بحث أو مقال  
محتويات المقرر:

Contents
Introduction to an essay or research.
Choosing the subject of the essay or research.
Main topics of the essay or research.
Collecting materials, Stage 1.
Collecting materials, Stage 2.
Collecting materials, stage 3.
Revisions of the collected materials.
Collection of references of the essay.





Writing the essay, Stage 1.
Writing the essay, Stage 2.
Writing the essay, stage 3.
Editing of the materials.
Revisions of the written materials.
An overall revision for presentation.