



اللائحة الدراسية:

السنة الأولى : 66 ساعة موزعة على النحو التالي :

الفصل الدراسي	عدد الساعات الأسبوعية			عدد الساعات	اسم المقرر	كود المقرر
	نظري	عملي	تمرين			
الأول	3	4	0	7	كيمياء عامة	104ك
	2	4	0	6	نبات عام	101ن
	2	4	0	6	حيوان عام	101ح
	2	2	0	4	جيولوجيا طبيعية وتاريخية	101ج
	2	2	0	4	ضوء وكهربية ومغناطيسية	103ف
	2	0	1	3	تفاضل وتكامل وجبر	105ر
	2	0	1	3	لغة انجليزية	101ل
الثاني	3	4	0	7	كيمياء عامة	105ك
	2	4	0	6	نبات عام	102ن
	2	4	0	6	حيوان عام	102ح
	2	2	0	4	بلورات ومعادن	102ج
	2	2	0	4	حرارة وخواص مادة	104ف
	2	0	1	3	تفاضل وتكامل وهندسة	106ر
	2	0	1	3	لغة انجليزية	102ل

السنة الثانية: 68 ساعة موزعة على النحو التالي :

الفصل الدراسي	عدد الساعات الأسبوعية			عدد الساعات	اسم المقرر	كود المقرر
	نظري	عملي	تمرين			
الأول	3	4	0	7	حبلبات وحشرات	201ح
	3	4	0	7	نبات اقتصادي وطحالب وبيكتريا	201ن
	2	0	1	3	الديناميكا الحرارية الكيميائية	205ك
	2	4	0	6	كيمياء عضوية	206ك
	2	2	0	4	ضوء فيزيائي	207ف
	2	0	1	3	رياضيات	207ر
	2	0	0	2	حقوق الانسان والمبادئ القانونية العامه	بدون
	2	0	1	3	لغة انجليزية	201ل
الثاني	3	4	0	7	لافقاريات وحشرات	202ح
	3	4	0	7	بيئة وفسولوجيا البذور وتصنيف زهري	202ن
	2	4	0	6	كيمياء غير عضوية	207ك
	2	0	1	3	كيمياء عضوية	208ك
	2	2	0	4	فيزياء ذرية واطياف	208ف
	1	2	0	3	علوم الحاسب	208ر
	2	0	1	3	لغة انجليزية	202ل



السنة الثالثة : 64 ساعة موزعة على النحو التالي

الفصل الدراسي	عدد الساعات الأسبوعية			عدد الوحدات	اسم المقرر	كود أو رقم المقرر
	تمرين	عملي	نظري			
الأول	0	4	2	6	فطريات	303ن
	0	4	4	8	فيروسات و اكتينوميسيتات وريكتسيا- ميكروبيولوجي(اغذية وتحلل)	311ن
	1	0	2	3	فيزيائية (كيناتيكا التفاعلات والغازات)	311ك
	0	4	2	6	غير عضوية(العناصر الانتقالية والمترابكات)	312ك
	0	4	2	6	عضوية فيزيائية وحيوية	321ك
	1	0	1	2	مبادئ علم الحاسب	338ر
	0	0	1	1	لغة انجليزية	301ل
الثاني	0	4	2	6	ميكروبيولوجي المياه والعوالق الطحلبية	312ن
	0	4	4	8	مناعة - مناخ و ميكروبيولوجي التربة	313ن
	1	4	4	9	فيزيائية(السطوح والحفز والغرويات) - تحليلية(كمية ووزنية وخامات	322ك
	0	4	2	6	عضوية (حلقية متجانسة)	323ك
	0	0	1	1	احتمالات واحصاء	339ر
	0	0	2	2	لغة انجليزية	302ل

السنة الرابعة 69 ساعة موزعة على النحو التالي:

الفصل الدراسي	عدد الساعات الأسبوعية			عدد الوحدات	اسم المقرر	كود أو رقم المقرر
	تمرين	عملي	نظري			
الأول	0	2	2	4	فسولوجيا الكائنات	411ن
	1	2	2	5	بيئة الكائنات - ميكروبيولوجيا(طبية وتلوث)	414ن
	0	2	2	4	امراض نبات	415ن
	1	4	4	9	كيمياء فيزيائية - كيمياء تحليلية	417ك
	1	4	2	7	كيمياء عضوية	418ك
	-	-	2	2	بحث او مقال	بدون
	0	0	1	1	لغة انجليزية	401ل
الثاني	1	2	2	5	ميكروبيولوجي	416ن
	1	2	2	5	فلورا - وراثه ميكروبيولوجية وهندسة وراثية	417ن
	0	2	2	4	فسولوجيا الطحالب وعلاقة العالق بالطفيل	418ن
	1	4	4	9	كيمياء غير عضوية - كيمياء فيزيائية	419ك
	1	4	2	7	كيمياء عضوية	420ك
	0	0	2	2	بحث او مقال	بدون
	0	0	2	2	لغة انجليزية	402ل
	0	2	1	3	حاسب	بدون



المحتوى العلمي:

كود المقرر: 104 ك اسم المقرر: كيمياء عامة

Physical Chemistry - Gaseous state – Thermochemistry - Chemical equilibrium – Solutions - Problems in physical Chemistry - Inorganic Chemistry - Chemical Calculations - Atomic spectra and Quantum numbers - Properties of of periodic table - Chemical bonding. - Practical part

كود المقرر: 101 ن اسم المقرر: نبات عام

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 - Study the organisms' diversity - Classification the organisms in Plant kingdom according to their specific characters - Study the general characters for each group in the classification using an example for each one.

كود المقرر: 101 ح اسم المقرر: حيوان عام

Essential of anatomy and physiology of humandigestive system / Practical: External feature and musculature of EgyptianToad - Essential of anatomy and physiology of humancardiovascular system / Practical: Anatomy of digestive& urinary systemsof Egyptian toad - Essential of anatomy and physiology of humanrespiratory system / Practical: Anatomy of male and female reproductive systems (of Egyptian toad - Essential of anatomy and physiology of human renalsystem / Practical: Anatomy of circulatory systems of Egyptian toad - Essential processes of human neurophysiology / Practical: Anatomy of nervous system of Egyptian toad - Essential processes of human endocrinology / Practical: Skeleton of Egyptian toad - General and Functional cytology /Practical: Generalhistology of connective animal tissues - General and Functional cytology / Practical: Generalhistology of muscular and nervous animal tissues - General and descriptive animal histology / Practical:Functional histology (tissues of digestive, respiratory systems -General and descriptive animal histology - General and descriptive animal histology

كود المقرر: 101 ج اسم المقرر: جيولوجيا طبيعية وتاريخية

مقدمة في علم الجيولوجيا - نشأة الكون - التركيب الداخلي للأرض - التراكيب الولية و الثانوية في الصخور الرسوبية - علم المعادن - علم الصخور - التجوية الفيزيكية و الميكانيكية و الكيميائية - العوامل الهدمية و البنائية للرياح و الكتلان الرملية و اشكالها - البحار و المحيطات - المياه الجوفية - الزلازل و البراكين و نظرية الألواح التكتونية

كود المقرر: 103 فاسم المقرر: ضوء وكهربية ومغناطيسية

Nature of light - Refraction through lenses - Optical instruments - Dispersion - Photometry - 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 - Electromotive forces and induction

كود المقرر: 105 ر اسم المقرر: تفاضل وتكامل وجبر

المتباينات - النهايات والاتصال - المشتقات - تطبيقات على المشتقات - الاستنتاج الرياضي - الكسور الجزئية
كود المقرر: 105 كاسم المقرر: كيمياء عامة

Physical Chemistry - The Phenomena of electolysis, 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

كود المقرر: 102 ن اسم المقرر: نبات عام

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

كود المقرر: 102 ح اسم المقرر: حيوان عام

Instruments in taxonomy - Bases of taxonomy - Five kingdoms theory - General characters and taxonomy of Sarcodina andCiliophora - General characters and taxonomy of Zoomastigophoraand Apicocomplexa - General characters and taxonomy of Porifera - Revision - General characters and taxonomy of Hydrozoa andScyphozoa - General characters and taxonomy of Anthozoa - General characters and taxonomy of turbellarians - General characters and taxonomy of monogeneans - General characters and taxonomy of Cestoda - General characters



and taxonomy of Nematoda

كود المقرر: 102 ج اسم المقرر: بلورات ومعادن

Course overview; what is Geology - Crystal, Elements of crystals - Crystal symmetry, Elements of symmetry - Crystal systems (I) - Crystal systems (II) - Hemihedral&Holohedral forms - Mid-Term Examination, and review - Mineralogy, Physical Mineralogy - Physical Properties of Minerals - Density and Specific Gravity - Origin of Minerals, Classification of Minerals - Chemical Classification - Rocks, Rock cycle

كود المقرر: 104 ف اسم المقرر: حرارة وخواص مادة

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 - Simple Moment of inertia for some bodies - Simple pendulum - Some experiments - Hook's law - Elasticity moduli - Relation between elasticity moduli - Stress-Strain curves - Some exp - Pressure - Pascal's rule - Archimede's rule - Bernoulli's equation - Surface tension - Some exp part1 - Pressure - Pascal's rule - Archimede's rule - Bernoulli's equation - Surface tension - Some exp part2 - Bernoulli's equation Viscosity (Poiseuille's formula - Stokes law) - Some experiments. Part1 - Bernoulli's equation Viscosity (Poiseuille's formula - Stokes law) - Some experiments. Part2

كود المقرر: 106 ر اسم المقرر: تفاضل وتكامل وهندسة

مجموع تكامل ريمان - تكامل ريمان - طرق التكامل - تكامل الدوال المثلثية - تطبيقات التكامل - المساحة - طول المنحني - الحجم - الخط المستقيم - الدائرة

كود المقرر: 102 ل اسم المقرر: لغة انجليزية

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 - The Properties of Air. Reading

كود المقرر: 201 ح اسم المقرر: حبلبات وحشرات

Basis of chordates taxonomy, Cephalochordata - General Characters and taxonomy of Agnatha - Characters and taxonomy of Chondrichthyes - Characters and taxonomy of Osteichthyes - Characters and taxonomy of Amphibia - Characters and taxonomy of Reptilia - Characters and taxonomy of Aves - Characters and taxonomy of Mammalia - Systematic position and general characters of 10-insects, Attributes of survival, dominance of insects - General insect morphology Head, Thorax and abdomen in locust or cockroach - General insects anatomy (notes about all systems in insect - Bionomics and Metamorphosis of locust or cockroach)

كود المقرر: 201 ن اسم المقرر: نبات اقتصادي وطحالب وبيكتريا

Introduction to economic plants and their classification on the basis of their use - Fibers and fibrous plants, Drink plants and Latex and Gum - Medicinal plants, drugs and antibiotics and Volatile and non-volatile oils - Spices and Condiments, Gums and Resins and Tannins and Dyes - Introduction to bacteria, The bacterial cell shapes, sizes and arrangement), Chemical composition of bacterial cell - Bacterial nutrition, Bacterial endospore - Reproduction of bacteria - Bacterial growth, physical and chemical factors affecting the bacterial growth - Phytoplankton, Reproduction and life history in algae - Benthos, Utilization of algae - Algal nutrition - Classification of algae - Different groups of algae

كود المقرر: 205 ك اسم المقرر: الديناميكا الحرارية الكيميائية

Third law Second law of thermodynamics - Introduction of thermodynamics - First law of thermodynamics - Chemical equilibrium in solids of thermodynamics -

كود المقرر: 206 ك اسم المقرر: كيمياء عضوية

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

كود المقرر: 207 ف اسم المقرر: ضوء فيزيائي

Simple harmonic motion part1 - Simple harmonic motion part2 - Interference part1 - Interference part2 - Interference part3 - Interference part4 - Interference part5 - Diffraction of light part1 - Diffraction of light part2



- Diffraction of light part3 - Polarization of light part1 - Polarization of light par2 - Polarization of light part3 - Polarization of light part4

كود المقرر: 207 اسم المقرر: رياضيات

Polar coordinates and its applications - The function of two variables, continuity, the derivation and applications - Study of double integration in different coordinates - Improper integrals - Leibniz's, Taylor and Maclaurin theories

كود المقرر: بدون اسم المقرر: حقوق الانسان والمبادئ القانونية العامة

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

كود المقرر: 202 ح اسم المقرر: لافقاريات وحشرات

Introduction to coelomic invertebrates - Phylum Annelida - Phylum Arthropoda part 1 - Phylum Arthropoda part 2 - Phylum Mollusca - Phylum Echinodermata part 1 - Phylum Echinodermata part 2 - Importance of coelomic invertebrates - Position of head capsule and head appendages - Forms of thoracic segment and types of appendages - The abdomen and its appendages (visceral, caudal and genital appendages) - Types of metamorphosis, larvae and pupae

كود المقرر: 202 ن اسم المقرر: بيئة (غطاء نباتي وتربة وفسولوجيا البذور وتصنيف زهري)

Chemical composition of seed - Toxins in seeds - Dormancy - Physiology of seed germination - Utilization of food reserves for seedling growth - Phytohormones - Definition of Plant Ecology - Population, Community and Ecosystem- Ecological amplitude - Factors of the Environment - Origin and Development of Vegetation- Succession of Vegetation: hydrosere , xerosere - Field Studies of Vegetation - Soil Physical & chemical properties - Soil organic matter and humus - Plant Taxonomy: Principals of plant taxonomy, Types and Structure of flowers, inflorescence and fruits - Pollination / Fertilization - Representative families of Monocots - Representative families of Dicots

كود المقرر: 207 ك اسم المقرر: كيمياء غير عضوية

Group O Group I to VII - Hydrogen and hydrides - Introduction to S-P block -

كود المقرر: 208 ك اسم المقرر: كيمياء عضوية

Introduction of organic compounds - Nomenclature of aromatic compounds - Benzene and reactions of aromatic compounds - Alkyl aromatic compounds - Nitro aromatic compounds - Amino aromatic compounds - Phenols - Aromatic aldehydes and ketones - Aromatic acids - Aromatic sulphonic acid - Introduction of bifunction compounds - different families of bifunction copounds

كود المقرر: 208 ف اسم المقرر: فيزياء ذرية واطياف

Cathode ray - Electromagnetic radiation - Spectra - Atomic models - Atomic hydrogen spectra - Bohr theory & hydrogen atom - Sommerfeld theory - Spectra of hydrogen like ions - Fine structure spectra of alkali atom - Photo electric effect - X-ray part1 - X-ray part2 - X-ray part3

كود المقرر: 208 ر اسم المقرر: علوم الحاسب

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

كود المقرر: 202 ل اسم المقرر: لغة انجليزية

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 - Doing Science - Analogy and Memory - Energy

كود أو رقم المقرر : 303 ن اسم المقرر : فطريات

Introduction: Historical background General characteristics, Modern taxonomy of fungi, Amoebozoan fungi, Chromoalveolata fungi, K. Fungi: Chytridiomycota, K. Fungi: Zygomycota K. Fungi: Basidiomycota, K. Fungi: Ascomycota and Mitosporic fungi.

كود أو رقم المقرر : 310 ن اسم المقرر : فسيولوجي- فيروسات اكتينومييسينات وريكتسيا

Introduction to viruses and bacteria, Groups of viruses and bacteria, The phototrophic, gliding, sheathed bacteria, morphology of viruses, Budding and/or appendaged bacteria, and the spirochaetes, cultivation of viruses, Spiral and curved bacteria, Gram negative aerobic bacteria, separation of viruses, Gram negative cocci and coccobacilli,



Gram negative anaerobic cocci, Gram negative chemolithotrophs, viruses Groups, Methane producing bacteria, Endospore forming rods and cocci, Gram positive cocci, viruses groups, Gram positive asporogenous rod-shaped bacteria, The actinomycetes, viruses group, Actinomycetes, viruses groups, Rickettsias, viruses groups, Mycoplasmas, viruses groups, Forms of nutrients, Uptake, transport, Functions, deficiency.

كود أو رقم المقرر : 311 ك أسم المقرر : فيزيائية (كيناتيكاالتفاعلات والغازات)

Chemical kinetics, Kinetic theory of gases.

كود أو رقم المقرر : 312 ك أسم المقرر : غير عضوية (العناصرالانتقالية والمترابكات)

Block elements, Complexes, Practical part.

كود أو رقم المقرر : 321 ك أسم المقرر : عضوية فيزيائية وجيوية

Bond Polarity and Inductive Effect, Resonance Effect and Hyper conjugation, Aromaticity, Hydrogen Bonding, Electrophilic Addition, Free Radical Addition, Acidity of carboxylic acids, Acidity of Phenols, Acidity Carbon Acids, Organic Bases, Nucleophilic substitution reaction of alkyl halide, Elimination Of Haloalkane, Dehydration of Alcohols. Carbohydrate, lipids, proteins and enzymes.

كود أو رقم المقرر : 338 رأسم المقرر : مبادئ علم الحاسب

Review the basics of database concepts: relational vs. flat database, database design techniques, relational database structure, and data retrieval, Identify primary keys, foreign keys, relationships between tables and referential integrity, Explain creating, deleting and adding relationships, Define creating relations and join in queries, Differentiate between select queries and crosstab queries, Demonstrate creating action queries, Dealing with SQL, Explain macros and events, Apply Visual Basic modules, Explain and demonstrate Internet features of Access.

كود أو رقم المقرر : 312 ن أسم المقرر : ميكروبيولوجيا المياه والعوالم الطليبية

Introduction to aquatic ecosystem in relation to aquatic microbiology- phycology and phytoplankton, Aquatic virus, aquatic fungi, aquatic bacteria, Phytoplankton, Role of microorganisms in determination of water quality

كود أو رقم المقرر : 313 ن أسم المقرر : : مناعة - مناخ وميكروبيولوجيا التربة

Introduction to soil environment, Soil bacteria, Soil actinomycetes, Soil fungi, Soil algae and soil fauna, Organic matter decomposition, Carbon cycle, Nitrogen cycle, Microbial transformation of phosphorus and sulphur, Pesticides and herbicides and soil contamination, Interactions among species, Microbiology of the rhizosphere, Immunity theories, antigens and antibodies types and their different reaction, Climate temperature and moisture, liquid forms of precipitation as climatic elements and their effects on micro flora and plants, types of rainfall, effects of wind on plants, green house global climatic changes and their effects on water resources.

كود أو رقم المقرر : 322 ك أسم المقرر : فيزيائية(السطوح والحفز والغرويات) (ورقة أولى) - تحليلية (كمية ووزنية وخامات)(ورقة ثانية)

Physical chemistry part: The solid gas – interface, The solid liquid interface, Surface area and pore structure, Homogeneous catalysis, Heterogeneous catalysis, Absolute rates of surface reactions, Acid - base solid catalysts, Colloidal solutions; definition, preparation, purification of colloidal solutions, Properties and some applications of colloidal, solutions, Analytical chemistry part: Neutralization Titrations, Oxidation-Reduction Titrations, Precipitation Titrations, Complexation Titrations, Practical part

كود أو رقم المقرر : 323 ك أسم المقرر : عضوية (حلقيية متجانسة)

Introduction, Nomenclature of cyclic hydrocarbons, Strain energy of alicyclic hydrocarbons, Bonding in cycloalkanes – angle strain and torsional strain, Consequences of angle strain for cyclic compounds, Stereochemistry and cyclic hydrocarbons, Conformations of cyclohexanes, Axial and equatorial hydrogens in cyclohexane, Conformational equilibria for monosubstituted cyclohexanes, Drawing structures of cyclohexane, Disubstituted cyclohexanes, Reactions of cyclic hydrocarbons, Preparations of cyclic hydrocarbons- small-ring cycloalkanes, Preparation of cyclohexanes - the Diels - Alder reaction.

كود أو رقم المقرر : 339 أسم المقرر : probability and Statistic

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.

كود أو رقم المقرر : 411 ن أسم المقرر : (physiology of microorganisms)

Introduction, Chemistry of microbial cell, molecular Architecture, growth, Chemical requirements for growth,



Nutrient ,Acquisition, The Physical Environment and growth, Enzymes characteristics and classification, Primary metabolism, Secondary metabolism, Inhibitors and antibiotics.

كود أو رقم المقرر : 414 ن أسم المقرر : بيئة الكائنات - ميكروبيولوجيا(طبية وتلوث)

Introduction, Microbial ecology, Ecosphere ,Biosphere ,Soil, Detecting Pathogens from the Environment, Microbial Indicators of Environmental contamination, Nutrient Cycles, Interaction, Plant-Microbe Interactions, Animal-Microbial Interactions, Aerospora.

كود أو رقم المقرر : 415 ن أسم المقرر : امراض نبات

Introduction to plant pathology-The concept of the disease-Classification of the plant diseases, Parasitism and Disease development, Disease Cycle, Plant diseases caused by Fungi, Plant diseases caused by Bacteria, Plant diseases caused by Viruses, Plant diseases caused by parasitic higher plants, How pathogens attacks their hosts, How hosts defend themselves, Control of plant diseases.

كود أو رقم المقرر : 417 ك أسم المقرر : كيمياء فيزيائية (ورقة أولى) – كيمياء تحليلية (ورقة ثانية)

Physical chemistry part: Reversible and irreversibl cells, Cell reaction and emf,Nernst theory of electrode , potential, Single electrode potential, Thermodynamics and emf,Classification of electrodes, Electrochemical cells, Some applications of emf measurements, Radiative processes, Nonradiative processes, Applications of triplet state, Practical part.

Analytical chemistry, part: Electromagnetic radiation,Beer-Lambert's law, Spectrophotometer components, Ideal situation for UV-Vis spectrophotometric analysis, Qualitative and quantitative applications of spectrophotometry, Solvent extraction, Column Chromatography, Efficiency of separation, Potentiometry, Reference electrodes, Membrane indicator electrodes

كود أو رقم المقرر : 417 ن أسم المقرر : **Flora, Microbial Genetics and Genetic Engineering**

History, Introduction, DNA (gene) structure and function, Mechanism of DNA replication, RNA polymerase structure and function, Transcription in prokaryotes and Eukaryotes, Regulation of Lac operon, Regulation of Trp operon, Temporal regulation, Structure of rRNA, tRNA and Mechanism of Translation, DNA manipulation, Techniques used in genetic engineering, Gene cloning and its applications, Introduction to Egyptian Flora, historic outlook, Characteristics of the Egyptian Flora, Flora of the Mediterranean Region, Flora of the Desert Region, Flora of the Red Sea Region, Flora of the Nile Region, Flora of the Sinai, Flora of the Jebel Elba Region, Flora of the Oases, Uses and value of the Egyptian Flora, Human Impacts on the flora, Methods of Egyptian flora Conservation.

كود أو رقم المقرر : 418 ن أسم المقرر : فسيولوجيا الطحالب وعلاقة العالق بالطفيل

Introduction to physiology of algae, Growth curve in the limited culture, Continuous culture of algae and its growthcurve, Photosynthesis process, Respiration, Nitogen fixation, Growth media, Inorganic nutrition of algae, Organic nutrition of algae, Vitamins requirements, Herbicides affecting on algal growth, Heavy metal tolerance in algae, Reserve food, Fungal-plant ,confrontation, Role of toxin in ,disease development, Host-Plant COLONISTION and GENETICS OF PATHOGENICITY, MECHANISMS OF DISEASE RESISTANCE, Constitutive Host defenses and BIOCHEMICAL,RESISTANCE MECHANISMS, GENETICS OF PLANT RESISTANCE, Systemic Acquired Resistance, Fungal-plant confrontation

كود أو رقم المقرر : 419 ك أسم المقرر : كيمياء غير عضوية (ورقة أولى)- كيمياء فيزيائية (ورقة ثانية)

Inorganic chemistry part: Valiancy bond theory, Crystal field theory, Applications of crystal field theory, Molecular orbital theory, The main characters of lanthanides and actinides, The separation and extractions of lanthanides, The reasons for their position in periodic table and understanding their electronic configurations, The lanthanide contraction and synthesis the lanthanide elements and their binary compounds, The coordination chemistry of lanthanides, The electronic and magnetic properties of lanthanides, The main characters of actinides, Extraction of thorium element ,The meaning of enrichment of uranium its isotopes

Physical chemistry part: Irreversible process, Polarization, Determination of polarization, Tafel equation, Polarography, Application of polarography, Principles of spectroscopy, Properties of light, Beer-Lambert' s law, Applications of UV-Visible spectroscopy, IR spectroscopies (Rotation; Vibration and electronic transition),Raman spectra, Practical part.

كود أو رقم المقرر : 420 ك أسم المقرر : كيمياء عضوية

IR spectroscopy (Theory, Stretching and binding vibrations, Wavelength, Wave number, Hooks low for



calculation of bond frequency, Electronic Spectroscopy (Theory, absorption law, Chromophores & auxochromes, Bathochromic, Hypsochromic, Hyper and hypochromic effects, Woodward rules for conjugated dienes, unsaturated ketones and carbonyl carbonyl compounds, ¹H-NMR spectroscopy, (Theory, Chemical shift, Spin-spin coupling, Integration of signals, Effect of inductive and mesomeric effects on chemical shift value, anisotropic effect, coupling constants, and complex spectra, ¹³C-NMR Spectroscopy, Mass spectroscopy (Theory, Molecular and base peaks, The nine fragmentation rules, MS spectra of hetero-atom containing compounds- Hydrogen index for organic compounds, Combined problems including IR, UV & Vis, NMR and MS spectroscopy, Dyes (Relationship between color and Chemical constitution), Classification of dye: Azo dyes- Nitro phenyl dyes- Xanthen dyes- Reactive dyes- Disperse dyes – Diphenylmethane dyes – Triphenylmethane dyes and vat dyes.

كود أو رقم المقرر: بدون أسم المقرر : بحث ومقال

Introduction, Background and historical review, Context, Discussion, Concluding remarks, References.

كود أو رقم المقرر: 402 ل أسم المقرر : لغة انجليزية

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 - Structure and cohesion - Learner- centered approach - Communicative approach – Lecturing - Discussion on groups

أسم المقرر : حاسب

world wide web (www) - History, Working, Web Browsers and their versions, Its functions, URLs, websites, Domain names, Portals. Concept of Search Engines, Search engines types, searching the Web and Web Servers, client and server techniques., Internet basics:, Internet Protocols, Internet Services – usenet, gopher, wais, archie and veronica, irc world 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.

