

مقررات المستوى الأول
١- المقررات الثقافية
(تاريخ علوم - تغذية صحية - حقوق انسان)

اسم المقرر	كود المقرر	النقاط البحثية	عنوان الایمیل الذی سوف یتم ارسال البحث عليه
تاريخ العلوم	١٢ م ك	١- إسهامات الحضارة الفرعونية في علوم الفلك والعمارة	university@fsc.bu.edu.eg
		٢- إسهامات الحضارة الإغريقية في علوم الرياضيات والفلك	
		٣- إسهامات الحضارة الإسلامية في علوم الطب والصيدلة	
		٤- إسهامات الحضارة الإسلامية في علوم الفلك وعلوم الرياضيات	
		٥- معابر انتقال الحضارة الإسلامية إلى أوروبا	
		٦- اهم العلوم في العصر الحديث	
التغذية الصحية	١٣ م ك	١- النظام الغذائي في أمراض الكبد.	university@fsc.bu.edu.eg
		٢ - الأنيميا و فقر الدم.	
		٣- مرض السكرى و التغذية العلاجية لمرضى السكرى.	
		٤- الفيتامينات الذائبة في الدهون.	
		٥- البروتينات.	
حقوق الانسان	٥٠ م ج	١- النظام القانوني لقواعد حماية حقوق الانسان.	university@fsc.bu.edu.eg
		٢- حقوق الانسان في الأديان السماوية.	
		٣- تطور فكره حقوق الانسان في العصور الحديثة.	
		٤- مصادر حقوق الانسان.	
		٥- أنواع حقوق الانسان.	
		٦- أنواع الفساد.	
		٧- أسباب الفساد ووسائل مجابهته.	

١ - قسم الرياضيات

اسم المقرر	كود المقرر	النقاط البحثية	عنوان الایمیل الذی سوف یتم ارسال البحث علیه
حاسب الى (١)	٣٠ م ج	examples) about C++ program include (Short History, Development Process, Properties, Character Set, Identifiers, Data Types, Constants, Variables).	math_1@fsc.bu.edu.eg
		2-Talk briefly and write some examples (or applications) more about C++ Iteration Statements, (Increment, Decrement, Operational Assignment) Operations.	
		3-Talk briefly and write some examples (or applications) more about C++ the Arithmetic Operations, "Math.h" Library and Selection Statements.	
		4-Talk briefly and write some examples (or applications) about Functions in C++ program (Definition, Return value, Inline, Overloading and Recursive) and Break, Continue Statements.	
		5-Talk briefly and write some examples (or applications) about Using Functions (Declaring, Calls, Type void , Header files) and Iteration Statements.	
حاسب الى (٢)	٤٠ م ج	1.Find the product of two matrices	math_1@fsc.bu.edu.eg
		2.Find the inverse of the matrix	
		3.Search within an array (numerical) known for a specific value	
		4.Search within an array (numerical) known about the largest value	
		5.Search for a specific name in a list of names	
		The project must contain 1- Abstract and introduction. 2- Mathematical illustration for solution. 3- Algorithm and flowchart. 4- A code using C++ language. 5- Print the output in a text file. 6- References.	
رياضيات (١)	١٠٠ ر	١- الاستنتاج الرياضی مع الامثلة	math_1@fsc.bu.edu.eg
		٢- الكسور الجزئية مع الامثلة	
		٣- مفكوك ذات الحدين مع الامثلة	
		٤- تفاضل الدوال وتطبيقات على التفاضل مع الامثلة	
		٥- مفكوك تايلور ومكلاورين مع الامثلة	
رياضيات (٢)	١٠٥ ر	1-Talk briefly and write some examples about definite integrals and Parabola section.	math_1@fsc.bu.edu.eg
		2-Talk briefly and write some examples more about integration Methods by (Parts, Substitution, and Partial Fractions) and Ellipse section.	
		3-Talk briefly and write some examples of Trigonometric substitution and the circle (general equation, tangent equation, equation, chord tangent equation, orthogonal circles).	
		4-Talk briefly and write some examples about infinite integrals and Conic Sections (Ellipse and Hyperbola) centered at (h,k) (identify the directrix, focus and focal width).	
		5-Talk briefly and write some examples about Trigonometric integrals and Hyperbola section.	

٢ - قسم الفيزياء

اسم المقرر	كود المقرر	النقاط البحثية	عنوان الايميل الذى سوف يتم ارسال البحث عليه
فيزياء عامه (١)	١٠٠ ف	1- Bernoulli's and continuity equations.	physics_1@fsc.bu.edu.eg
		2- Surface tension phenomenon	
		3- Dimension theory and its applications.	
		4- Elasticity phenomenon in solids.	
		5- The elastic moduli and their relationship.	
		6- Application of thermal expansion in engineering	
		7- Thermometers	
		8- Specific heat measurements	
		9- Heat transfer ways	
		10- Blackbody radiation and temperature	
فيزياء عامه (٢)	١٠٥ ف	1- Measuring the value of the fundamental electric charges by Millikan Oil – Drop experiment.	physics_1@fsc.bu.edu.eg
		2- Applications of Gauss's law	
		3- The fundamental physical properties of a parallel-plate capacitor with a dielectric.	
		4- Practical applications on the motion of charged particles in a uniform magnetic field.	
		5- Ampere's law applications.	
		6- Reflection & Refraction on Smooth surfaces and its laws	
		7- Different Images formed by spherical mirrors by reflection	
		8- Refraction through thin lenses and principal Foci	
		9- Human eye and imperfections in vision and its treatment	
		10- Simple & compound Microscope	

<p>physics_1@fsc.bu.edu.eg</p>	<p>Solve the following problems</p> <p>1- Two plates spaced 150 mm apart are maintained at 1000°C and 70°C. The heat transfer will take place mainly by 1 gm of ice at 0° C is mixed with 1 gm of steam at 100° C. After thermal equilibrium, the temperature of the mixture is....</p> <p>2- If a 1 m long steel wire having area 5×10^{-5} is stretched through 1 mm by force of 10,000 N then young modulus of wire is.....</p> <p>3- Derive the dimensions of Stress and write about Thermal equilibrium</p> <p>4- Derive the dimensions of strain and write about Stress & Strain relation</p>	<p>ف ١٨٣</p>	<p>فيزياء تطبيقية (١)</p>
<p>physics_1@fsc.bu.edu.eg</p>	<p>1- Mirrors Equation.</p> <p>2- Images formed by convex lens.</p> <p>3- Images formed by spherical mirrors</p> <p>4- The compound Microscope</p> <p>5- Solve the following problems</p> <p>a- Two convex lenses with focal lengths 10.0 cm and 20.0 cm are separated by 70.0 cm. An object is located at 15.0 cm to the left of the first lens. Use the equation to calculate q_1, P_2, q_2, M_1 and M_2 as measured from the second lens, then describe the final image?</p> <p>b- A concave mirror forms a real image at 25.0 cm from the mirror surface along the principal axis. If the corresponding object is at a 5.0 cm distance, what is the mirror's focal length?</p> <p>c- A convex lens has $f = 25.0$ cm, if the corresponding object is at a 25.0 cm distance, what is the image distance?</p> <p>d- A concave lens has $f = 25.0$ cm, if the corresponding object is at a 25.0 cm distance, what is the image distance?</p> <p>6- Solve the following problems</p> <p>a- Two charges of 5 nC and 10 nC are separated by 12 mm calculate the electric force between them</p> <p>b- Calculate the equivalent capacitance of 12 uF, 15 uF, 20 uF connected in series.</p> <p>c- Two point charges are separated by 21.0 cm both with charge of -0.05 mC. The electric field at midway between the two charges...</p> <p>d- Two point charges are separated by 10.0 cm with charges of $2.00 \mu\text{C}$ and $2.00 \mu\text{C}$, respectively. What is the electric field at a point midway between the two charges?</p> <p>e- Calculate the equivalent capacitance of 12 uF, 15 uF, 20 uF connected in parallel.</p>	<p>ف ١٨٥</p>	<p>فيزياء تطبيقية (٢)</p>

٣ - قسم الكيمياء

اسم المقرر	كود المقرر	النقاط البحثية	عنوان الایمیل الذی سوف یتم ارسال البحث علیه
کیمياء عامه ١	١٠٠ ک	1- Gas laws	chemistry_1@fsc.bu.edu.eg
		2- Kinetic theory of gases	
		3- Real gases	
		4- Intermolecular attractive forces	
		5- Mass relations in chemistry (stoichiometry)	
		6- Chemical bonding and the rules of drawing Lewis structures	
		7- Molecular geometry and molecular orbitals	
		8- Atomic structure and quantum numbers	
کیمياء عامه ٢	١٠٥ ک	1- The colligative properties of solution and how does a solute affect them	chemistry_1@fsc.bu.edu.eg
		2-The different methods for calculating concentration of solution	
		3- Radioactive sources and emission(alpha,beta) energetic particles and gama rays	
		4- Chemical equilibrium	
		5- Ionic equilibrium	
		6- Concept of hybridizations theory	
		7- Functional group and homologous series	
		8- Systematic nomenclature	
		9- Isomers	
		10- Preparation, separation and purification of organic compounds	
		11- Electron displacement in organic compounds	
		12- Acid & Base strength in organic chemistry.	

chemistry_1@fsc.bu.edu.eg	<p>1- Production and chemical properties of sodium hydroxide</p> <p>2- Production and chemical properties of hydrochloric acid</p> <p>3- Production and chemical properties of sulfuric acid</p> <p>4- Production of copper and chemical properties of some of its compounds</p> <p>5- Production of iron and chemical properties of some of its compounds</p> <p>6- Production, uses and chemical properties of ammonia gas.</p> <p>7- Arrhenius, Bronsted Lowry and Lewis definitions of acids and bases with examples.</p> <p>8- Classification of inorganic compounds</p> <p>9- Production and the major role of nitrogen fertilizer in plants.</p> <p>10- Production and the major role of phosphate fertilizer in plants</p> <p>11- Production and the major role of potassium fertilizer in plants.</p>	<p>١٨٣ ك</p>	<p>كيمياء غير عضوية تطبيقية (١)</p>
chemistry_1@fsc.bu.edu.eg	<p>1- Carbohydrates</p> <p>2- Proteins</p> <p>3- Vitamins</p> <p>4- Lipids</p> <p>5- Hormones</p> <p>6- Classification of polymers based on synthesis</p> <p>7- Polyesters</p> <p>8- Polyamides</p> <p>9- Rubber</p> <p>10- Classification of dyes based on chemical structure</p>	<p>١٨٥ ك</p>	<p>كيمياء غير عضوية تطبيقية (٢)</p>

٤ - قسم الجيولوجيا

اسم المقرر	كود المقرر	النقاط البحثية	عنوان الايميل الذي سوف يتم ارسال البحث عليه
جيولوجيا عامة (١)	١٠٠ ج	الموضوع الاول: العوامل التي تؤثر في معدل التجوية الكيميائية	geology_1@fsc.bu.edu.eg
		Factors affect the rate of chemical weathering	
		الموضوع الثاني: العوامل التي تؤثر في معدل التجوية الفيزيائية	
		Factors affect the rate of physical weathering	
		الموضوع الثالث: فوائد ومخاطر الكثبان الرملية	
		Benefits and risks of sand dunes	
جيولوجيا عامة (٢)	١٠٥ ج	١- التصنيف الكيميائي للمعادن.	geology_1@fsc.bu.edu.eg
		٢- تكون المعادن من الحمى او المادة الصخرية المصهورة.	
		٣- تكون المعادن من المحاليل و من الغازات و الأبخرة.	
		٤- الخواص الطبيعية للمعادن.	
		5- Types of fossil remains	
		6- Importance of fossils	
		7- Paleozoic Mass Extinction	
		8- Mesozoic Mass Extinction	
		9- Precambrian and its life	
		10- physical events through the Cenozoic Era	

٥- قسم النبات

اسم المقرر	كود المقرر	النقاط البحثية	عنوان الایمیل الذی سوف یتم ارسال البحث علیه
نبات عام (١)	١٠٠ ن	1- General characteristics of virus.	botany_1@fsc.bu.edu.eg
		2- Interaction between phage and bacteria.	
		3- General characteristics of fungi.	
		4- Reproduction of bacteria.	
		5- Reproduction of fungi.	
نبات عام (٢)	١٠٥ ن	1- Protoplasm and colloidal state.	botany_1@fsc.bu.edu.eg
		2- Plant cell as an osmotic system.	
		3- Diffusion.	
		4- Osmosis.	
		5- Plasmolysis.	
		6- Permeability.	
		7- The plant cell wall and pits.	
		8- Non-living components in plant cell.	
		9- Types and forms of plant stomata.	
		10- The plant vascular system.	
		11- The plant dermal tissues system.	
		12- Types and forms of plant trichomes.	
		13- Simple permanent tissues.	
		14- Complex permanent tissues.	
		15- Mechanical plant tissue.	
		16- Anatomical features of xerophytes.	
		17- Anatomical adaptation in hydrophytes.	

٦- قسم علم الحيوان

عنوان الایمیل الذی سوف یتم ارسال البحث علیه	النقاط البحثية	کود المقرر	اسم المقرر
zoology_1@fsc.bu.edu.eg	1 Embryonic development of Amphioxus. 2 Ultrastructure and functions of nucleus. 3 General characters and Classification of epithelial tissue. 4 Connective tissues.	ح ١٠٠	حيوان عام (١)
zoology_1@fsc.bu.edu.eg	1-The components and functions of the digestive system. 2-The components and functions of the circulatory system. 3-Euglena (habitat, morphology, movement, nutrition, osmoregulation regulation, breathing, excretion, and reproduction). 4-Paramecium (habitat, morphology, movement, nutrition, osmoregulation regulation, breathing, excretion, and reproduction). 5-Leucosolenia (habitat, morphology, body wall, movement, nutrition, breathing, excretion, and reproduction).	ح ١٠٥	حيوان عام (٢)

٦- قسم علم الحشرات

اسم المقرر	كود المقرر	النقاط البحثية	عنوان الایمیل الذی سوف یتم ارسال البحث علیه
حشرات عام (٢)	١١٢ ش	1- Nervous system in insects	entomology_1@fsc.bu.edu.eg
		2- Reproductive system in insects	