Project Title	الخواص المعدنية والجيوكيميائية والهندسية للإنسيابات البازلتية في علعال شمال الأردن وتقييمها كمواد بناء وانشاء.
Principle Investigator/ Faculty	أ. د. رافع عارف شناق
Section	علوم الارض والبيئه
Number of Project	1/2017
Project Objectives	The main objectives of this research are: 1. Mapping the basalt in the study area using aerial photographs and topographic maps. 2. Describing the occurrences, external morphology, and extension of the basalt outcrops, their relation with the surrounding outcrops and full description of the lithology with megascopic description. 3. Evaluating the petrography description and complete geochemical analysis of Basalt. 4. Determining the engineering properties of basaltic rock to evaluate them as building stone and coarse aggregates as construction materials figure 2 shows the tests to be carried out for this purpose
Funding Agency	yu
Project Partners	
Project Budget	9530
Milestones and expected result	The expected results of studying the mineralogical and chemical composition and engineering properties of Al'al basalt rocks in this research can be summarized as follows: • Determining a mineralogical model and a petrographic description for the studied rocks. • A detailed lithological description of the studied rocks. • Establishing their geochemical characteristics for the studied rocks. • Determining and evaluating their engineering properties.

Project Title	تقييم تاثير مستخلص نبات Ephedra alte كمضاد للتأكسد في المختبر والوسط الحيوي
Principle Investigator/ Faculty	د.بهاء الدين محمد الطراد
Section	العلوم الحياتية
Number of Project	2/2017
Project Objectives	1- To determine the total phenolic content of the crude methanol extract and its different fractions (butanol, hexane and water) for the flower buds , stem and fresh aqueous extracts of E.alte . 2- To determine the antioxidant capacity in the same fractions for the flower buds, stem and fresh aqueous extracts of E. alte in vitro. 3- To carry out phytochemical screening for the flower buds, stem and fresh aqueous extracts. 4- To evaluate the capacity of anti oxidant of E. alte in vivo .
Funding Agency	YU
Project Partners	د.محمود القضاه د.رياض مهيدات
Project Budget	8950
Milestones and expected result	

Project Title	تطوير المقاييس الكيميائية للجرعات الاشعاعية بالاقتران مع ccd كاميرا
Principle Investigator/ Faculty	الدكتور ملهم ماجد اعيده،
Section	الفيزياء
Number of Project	3/2017
Project Objectives	- To develope several chemical dosimeters such as Fricke dosimeter, gel dosimeters, radiochromic solutions, and radiochromic films. - To measure the chemical dosimeters using the Ultraviolet-visible UV-VIS spectrophotometer and the CCD camera system. - To investigatethe effect of several parameters on the dosimeters such as: tempreture, x-ray or gamma irradiation, dye concentration. -To investigate the stability of chemical dosimeters over time after irradiation. - To validate the chemical dosimeters using planning software and/or standard Gafchromic film EBT-3 measurments.

	- To enhance local expertise in the medical dosimetry research in Jordan through Jordanian Universities,Jordan Atomic Energy Commission, and Jordanian Radiotherapy Centers.
Funding Agency	YU
Project Partners	الاستاذ الدكتور عبد المجيد الياسين، الدكتور انس عبابنه، الدكتور خالد ربابعه الجامعة الهاشمية
Project Budget	150000
Milestones and expected result	We expect to develope and measure chemical dosimeters with excellent agreement with the standard Gafchromic film EBT-3 measurements.

Project Title	تحضير ودراسة الخصائص البيولوجية لبعض العناصر الانتقالية عند ارتباطات Acid nalidixic للتغلب على مقاومة بعض انواع الميكروبات المقاومة للاجيال الجديدة من المضادات البكتيرية
Principle Investigator/ Faculty	د. وليد محمود المومني
Section	العلوم الطبية المساندة
Number of Project	4/2017
Project Objectives	1. The synthesized nalidixic acid derivatives ligands L4 will be characterized by elemental analysis, MS, 1H and 13C NMR and FTIR. 2. Preparation a series of lanthanides complexes with the synthesized compounds, Schem 1. 3. Characterization of the synthesized compounds by a variety of physical and chemical techniques including elemental analysis, thermogravimetric analysis (TGA), molar conductivity measurements, cyclic voltammometry, magnetic susceptibility, UV-Vis spectroscopy, and Infrared (IR) spectroscopy. 4. The fluorescence properties of the synthesized compounds in organic solvent will be studied. The influence of the solvent and the ligand on the fluorescence properties of the complexes will be investigated. 5. Screening the synthesized metal complexes for antibacterial activity against a panel of resistant clinical bacterial isolates. 6. Screening the synthesized metal complexes for antifungal activity against a panel of resistant pathogenic fungi.
Funding Agency	YU
Project Partners	د. ابراهيم عبدالرحيم مهيدات، د. زياد احمد امين طه، د. احمد كمال حجازي د. ليلى محمود مطالقه
Project Budget	9800

Milestones and expected result	A novel compounds derived from nalidixic acid could be prepared and could form stable complexes with lanthanide metals. The most probable coordination structure with metal ion will be proposed based on elemental analysis, TGA, molar conductivity, ^{1}H NMR, FTIR and UV-vis spectroscopic data. The synthesized compounds could be expected to have a high biological activity against clinical bacterial and fungal isolates mainly that cause urinary tract infections. The fluorescence properties of these complexes will be investigated. The results will be published in international Journals

Project Title	Effects of oleuropein on muscle glucose metabolism in healthy and diabetic rats
Principle Investigator/ Faculty	د. حكم حسن الخطيب
Section	العلوم الطبية المساندة
Number of Project	5/2017
Project Objectives	-To determine whether oleuropein improves muscle insulin sensitivity in muscle of heathy or diabetic rats. -To examine the effect of oleuropein on substrate utilization (mainly glucose) in healthy and diabetic rat muscles. -Reveal the molecular mechanism(s) by which oleuropein would ameliorate insulin resistance and diabetes in muscle tissues.
Funding Agency	YU
Project Partners	د. عصام قنيص
Project Budget	2600
Milestones and expected result	- oleuropein would improve glucose homeostasis in skeletal muscle. -oleuropein would improve insulin sensitivity in skeletal muscles. -oleuropein would up-regulate various signal molecules in insulin signnaling pathway including (PI3K, Akt-2, AS160 and Glut4). - oleuropein would stimulate other pathway parallels to that of insulin, more specifically oleuropein would stimulate the AMP-kinase pathway.

Project Title	الطباقية الصخرية وبعض الخصائص الفيزيائية لتكوين عمان السليسي شمال غرب اربد الاردن
Principle Investigator/ Faculty	أ.د. رافع عارف الشناق
Section	علوم الارض والبيئة
Number of Project	6/2017
Project Objectives	a. Identify and classify the different exposed rocks types Amman Silicified Limestone Formation, and their mineralogy. b. Deduce the depositional environment, lithological characteristics, sedimentary structures and fossil content of the Amman Silicified Limestone Formation. c. Study the major geological structures presented in the study area (joints, fractures, faults, folds, horst and grabens). d. Determine of the physical properties of the Amman Formation (mainly porosity and permeability) and their influence on the hydrogeology of the study area. e. Deduce the drainage system patterns and their effect on the hydrogeology of the aquifer.
Funding Agency	YU
Project Partners	
Project Budget	850
Milestones and expected result	- Deduce a geological map of the study area. - Determine of the physical properties of the Amman Silicified Limestone Formation (porosity and permeability) and their influence on the hydrogeology of the study area. - Identify and classify the characteristics and mineralogy of the Amman Silicified Limestone Formation. - Determine the depositional environment of the Amman Silicified Limestone Formation usimg microfacies analysis.

Project Title	الخصائص التركيبية والمغناطيسية لحبيبات الباريوم هكسا فرريت النانوية
Principle Investigator/ Faculty	د.عبدالرؤوف محمد جديع الديري
Section	الفيزياء
Number of Project	7/2017
Project Objectives	The main objectives of this research proposal are to: 1. Prepare $BaFe_{12}O_{19}$ nano particles by sol-gel method in laboratory and study their magnetic properties, particles size and structure. 2. Add Ti to the nano particles of $BaFe_{12}O_{19}$, to get $BaFe_{12-x}Ti_xO_{19}$ compound. 3. Use available equipments: XRD, SEM, VSM, and Mössbauer spectroscopy techniques to study the structural and magnetic properties of $BaFe_{12-x}Ti_xO_{19}$. 4. Compare results of this work with the available published results.
Funding Agency	YU
Project Partners	د. قاسم ابراهيم مهيدات
Project Budget	550
Milestones and expected result	We expect to get results that can be published in respected journals and a graduate student will complete a master's thesis. We think this proposal will encourage and attract graduate students to this field of research work.

Project Title	تقييم مدى تأثر المادة الوراثية في نبات القبار كمؤشر للتلوث في مناطق مختلفة في الاردن باستخدام تحليل كومت
Principle Investigator/ Faculty	د. وسام "محمد هادي" الخطيب
Section	العلوم الحياتية
Number of Project	8/2017
Project Objectives	• To assess the toxic effects of soil on growth and biochemical content of *Capparis spinosa* over two seasons. • To assess the degree of soil contamination on collected sites in Jordan using comet assay over two seasons. • To assess the potential of using *Capparis spinosa* as bioindicator
Funding Agency	YU
Project Partners	أ.د. احمد العقلة، أ.د. جميل اللحام

Project Budget	9800
Milestones and expected result	• Assessment of using plants as bioindicators for pollution • Measurement of heavy metals accumulation level in plants and soil samples collected from different areas in Jordan. • Measurements of DNA damage level in plants grown in different parts of Jordan • Assessment of contamination level in different areas in Jordan

Project Title	اثر أنوع من النشاط البدني على نسبة إفراز هرمون السيروتونين (دراسة مقارنة)
Principle Investigator/ Faculty	د. نضال مصطفى محمد بني سعيد
Section	قسم الرياضة البدنية
Number of Project	9/2017
Project Objectives	تهدف هذه الدراسة التعرف إلى: ١. اثر ممارسة تدريبات التحمل الدوري التنفسي على نسبة إفراز هرمون السيروتونين ٢. اثر ممارسة تدريبات القوة على نسبة إفراز هرمون السيروتونين. ٣. اثر ممارسة لعبة الريشة الطائرة على نسبة إفراز هرمون السيروتونين ٤.المقارنة في نسبة إفراز هرمون السيروتونين بين ممارسي تدريبات القوه وتدريبات التحمل ولاعبي الريشة الطائرة.
Funding Agency	YU
Project Partners	د.محمد بني ملحم، د.اسماعيل غصاب
Project Budget	3300
Milestones and expected result	١. يتوقع أن ممارسة تدريبات القوة والتحمل الدوري التنفسي ولعبة الريشة الطائرة ستزيد من نسبة إفراز هرمون السيوتونين ٢. يتوقع أن يكون هناك اختلافات في نسبة إفراز هرمون السيروتونين بين تدريبات القوة والتحمل الدوري التنفسي ولعبة الريشة الطائرة.

Project Title	التربه واستخدامات الأراضي في مدينة ابيلا الأثريه في سياق تطور المشهد الطبيعي
Principle Investigator/ Faculty	د.مهيب محمد حمدان عواوده
Section	علوم الارض والبيئة
Number of Project	10/2017
Project Objectives	1. Investigate soil development based on several parameters such as mineral contents and magnetic susceptibility. 2. Determine the chemical properties of the soil such as, cation exchange capacity (CEC), pH, salinity, etc. 3. Identify the physical characteristic of the soil such as, texture, color, etc. 4. Investigate the retrogression/degradation in soil fertility. 5. Determine the soil's parent material.
Funding Agency	YU
Project Partners	الطالبة روان رأفت محمد المصطفى
Project Budget	1000
Milestones and expected result	The expected outcomes of studying the chemical and physical properties in Abila (north Jordan) in this research can be summarized as follows: 1-Investigate soil development based on several parameters. 2-Explain the effects of ancient land use in terms of soil properties in Abila. 3-Determine the effects of Land Degradation on Soil Fertility and then identify the soil’s parent material.

Project Title	تأثير مكملات الأحماض الأمينية ذات السلسلة المتفرعة والأرجينين على التعب العصبي خلال اختبار كوبر عند عدائي المسافات المتوسطة.
Principle Investigator/ Faculty	د.محمد فايز عبد اللطيف أبو محمد
Section	قسم علوم الرياضة
Number of Project	11/2017
Project Objectives	1- Investigate the effect of branched-chain amino acids (BCAAs) with arginine (ARG) supplements on time of cooper test in middle-distance runners. 2- Investigate the effect of branched-chain amino acids (BCAAs) with arginine (ARG) supplementation on central fatigue biomarkers in middle-distance runners.
Funding Agency	YU
Project Partners	
Project Budget	7094.70
Milestones and expected result	We supposed that BCAAs with ARG supplements may ameliorate the performance of athletes during cooper test by decrease the BCAAs:TRP ratio.

Project Title	تصميم برنامج إلكتروني لمساق تخريج الأحاديث النبوية
Principle Investigator/ Faculty	أ.د. محمد علي العمري
Section	اصول الدين
Number of Project	12/2017
Project Objectives	أولاً: مجاراة الجانب العلمي والإلكتروني المنتشر، واستخدامه في التدريس، خاصة إذا علمنا أنّ مثل هذه المساقات التي تجمع ما بين الجانب النظري والعملي تحتاج إلى تدريب وممارسة عملية لتمكين الطلبة من فهمها وترسيخها في الذهن. ثانياً: لفت انتباه الطلبة إلى المادة العلمية المعروضة بطريقة حديثة تتناسب وطبيعة الحياة الإلكترونية المنتشرة. ثالثاً: استثمار الوسائل التعليمية ومنها الأجهزة الإلكترونية في التعليم ضمن المساقات ذات الصبغة العلمية، ومنها مساق تخريج الأحاديث النبوية. رابعاً: الحاجة إلى تطوير وسائل التعليم بما يحقق الأهداف المرجوة منه. خامساً: استثمار أوقات الطلبة خارج وقت المساقات لزيادة التعليم والتدريب (التعليم والتدريب الذاتي).

	سادساً: تسهيل العملية التدريسية على مدرس المادة.
Funding Agency	YU
Project Partners	د. نجاح محمّد العزام
Project Budget	2839
Milestones and expected result	الارتقاء بالجانب التعليمي والأساليب التعليمية المطلوبة، وبالتالي تحسين التحصيل العلمي لدى الطلبة.

Project Title	تأثير حبيبات النانو المصنعة على انبات بذور خضار مختارة من الاردن
Principle Investigator/ Faculty	د ربيعة يوسف رواشده
Section	العلوم الحياتية
Number of Project	13/2017
Project Objectives	1. To evaluate the effect of nanoparticles on seed germination and seedling growth. 2. To study the biochemical mode of action of the effective nanoparticles in seed germination.
Funding Agency	YU
Project Partners	د أمل حرب، د نزار سمارة
Project Budget	13850
Milestones and expected result	1. Enhancement of seed germination of important vegetables by the use of nanoparticles. 2. Understadning of the mechanism of action of nanoparticles in the enhancement of seed germination. 3. The results of this study are expected to encourage the large scale adoption of nanotechnology in the improvement of most important crops in Jordan.

Project Title	قياس تركيز الاوزون في جو مدينة اربد
Principle Investigator/ Faculty	د. خديجة محمود حماشا
Section	الفيزياء
Number of Project	14/2017
Project Objectives	Measurements of ozone concentration are so important because of its relation to air pollution with significant public health and agricultural impacts. Ozone plays important roles in atmospheric chemistry and radiative balance throughout the atmosphere. So we propose a one year project to measure the Ozone (O_3) concentrations in different sites of Irbid governorate using ozone monitor, besides measuring black carbon and carbon dioxide. This project will be indoor and outdoor field project in different sites of Irbid governorate. The target sites of our project will be: 1- Inside the science faculty building as an indoor study 2- an industrial region as an outdoor study 3- a crowded region as an outdoor study 4- a remote region as an outdoor study We aim also to have a data base for a future studies on ozone concentrations in the atmosphere in different regions and different times of the year.
Funding Agency	YU
Project Partners	
Project Budget	19720
Milestones and expected result	1- Daily ozone concentration for the in-door measurements 2- Daily ozone concentration for out-door measurements in summer time 3- Daily ozone concentration for out-door measurements in winter time 4- Black carbon and CO_2 concentrations for indoor and outdoor measurements 5- Temperature, barometric pressure, humidity, wind speed, wind direction and rainfall for each measurement.

Project Title	اثر تعدد الشكل الوراثي رقم ١٠٨٢ من A الى G في منطقة المحفز لجين الانترولوكين ١٠ على مستوى علاج التاكروليمس في مستقبلي زراعة الكلى من الاردنيين
Principle Investigator/ Faculty	د. مظهر سليم الزعبي
Section	العلوم الطبية الاساسية
Number of Project	15/2017
Project Objectives	تهدف هذه الدراسة بشكل اساسي الي اجراء مسح جزيئي للسلسلة الوراثية الخاصة في المنطقة المسؤولة عن التحكم بنسخ جين IL-10 لدى المرضى الذين قاموا بزراعة الكلى ويتلقون علاج التاكروليمس و مقارنة الطرز الجينية للمرضى لمعرفة الاثر الممكن لهذه الطرز على جرعة العلاج وامكانية تعديل الجرعات حسب استجابة المرضى. لمعرفة اثر التغيرات الجينية على فعالية العلاج و تركيزه في الدم.
Funding Agency	YU
Project Partners	د. خالد البطاينه ، د. بهاء الدين طراد
Project Budget	15550
Milestones and expected result	يتوقع الباحثون ان الاختلافات في المنطقة المسؤولة عن التحكم بجين IL-10 ستفضى الى نتائج لها اثر على مستوى الجرعات الدقيقة لعلاد التاكروليمس.

Project Title	محددات السلوك التصويتي للشباب الأردني في الانتخابات البلدية واللامركزية ٢٠١٧
Principle Investigator/ Faculty	د. محمد تركي بني سلامة
Section	العلوم السياسية
Number of Project	16/2017
Project Objectives	أ. التعرف على أنماط السلوك التصويتي من حيث المفهوم والدلالات،والعوامل المؤثرة فيه وربطها بمتغيرات الدراسة. ب. التطرق إلى العلاقات الارتباطية بين أنماط السلوك الانتخابي ومتغيرات الدراسة. تشخيص العوامل المؤثرة في السلوك التصويتي، ومحاولة توجيهه فكرا وممارسة.
Funding Agency	YU
Project Partners	د. خالد مفضي فالح الدباس، د. وصفي محمد عيد عقيل، د. خالد عيسى محمد العدوان، د. أيمن محمد زين هياجنة
Project Budget	7090
Milestones and expected result	الإجابة على تساؤلات الدراسة التالية: ١- ما هي محددات السلوك ألتصويتي للشباب الناخب الأردني؟ ٢- ما هو مستوى اهتمام الشاب الناخب الأردني بالسياسة؟ ٣- ما هي دوافع مشاركة الناخب الشاب الأردني بانتخابات اللامركزية والبلدية ؟ ٤- ما هو مستوى المشاركة في الانتخابات للشاب الناخب الأردني؟ ٥- ما أثر العلاقات الاجتماعية على السلوك ألتصويتي للناخب الشاب الأردني؟ ٦- ما هو تأثير الدعاية الانتخابية على السلوك ألتصويتي للناخب الشاب الأردني؟

	ما موقف الناخب الشاب الأردني من مسالة التصويت للمرأة في الانتخابات؟

Project Title	Development: Dolmen Heritage Park: Juffain In the Alkoura District – Irbid Governorate,Jordan
Principle Investigator/ Faculty	د. عاطف محمد الشياب
Section	الاثار
Number of Project	17/2017
Project Objectives	a. Survey: A comprehensive topographical survey and a structural survey are required. All other activities for the development of the Dolmen Heritage Park will be reliant on the survey maps to be produced in the first phase of the project. Borders and boundaries need to be identified, archaeological, park, infrastructural and destruction areas need to be identified and selected. AHVC 1-3 all four site statuses, p. 10 b. Destruction of the Field: the Juffain Dolmen field is on government land, but still is experiencing rapid encroachment through Agriculture, Urban and Industrial development and Human exploitation. Because it is in a forest, the Department of Agriculture has control of the site. They have approved the construction of a road destroying many monuments. In addition, the site is excessively large, to the extent that it is totally unfeasible to fence of the entire site to protect it. AHVC 2+3, p. 10 c. Archaeology: because of the completeness and diversity of megalithic structures in groups, separated by topographical boundaries and indications of sedentary occupation the Juffain field has the potential of providing answers to many questions pertaining to megalithic culture. AHVC 1-4, M-DT 5-6, p.10 d. The Heritage Park: with the recognition that dolmen fields are being destroyed and the Juffain field is in conservable condition, as well as being on government land and a strategic location, the development of a park is logical. Heritage for Jordan is a priority and sustainable tourism, with Jordanian University management the history of the site can be preserved and perpetuated through schools and on site learning. AHVC 1-3, 5-7, 9, p. 10, M-DT, SWOT Analysis, SMJAH, p. 14-15 e. Local Population: working with and integrating the local people of Juffain is the most certain way of protecting the site through buy-in. The project is going to need guards, workers and infrastructure. Through an education program the local people will learn about the history and resources of the site. They will understand when being involved from the beginning the goals of the project. SWOT Analysis, SMJAH, p. 14-15 with M-DT, MoTA and DoA, Yarmouk university and other internal and external entities. f. Awareness: Juffain is a National Treasure that is quickly gaining

	support for conservation for heritage purposes. With the recognition of the site and its megalithic culture the historical value is significant. Working with a M-DT can potentially skip years of delay through interagency exchange and partnerships. The site can be presented from many different directions not just archaeological. SWOT Analysis as above.
Funding Agency	YU
Project Partners	د.واصف احمد جمعة السخاينة، فراس محمد محمود علاونه، حسين محمود الجراح، كنت سكاتش
Project Budget	9810
Milestones and expected result	a. Archaeological study of a Greater Megalithic Field, with autonomous sedentary settlement. Verification of hypothesis of clan/social interaction in centers. b. Dating for the site and occupational time-line. c. Development of an Archaeological Field School for Jordan at Juffain. d. Development of plan for protection and conservation of the site e. Selection of areas for Park development to include all infrastructure. f. Development of a plan to manage the construction of the Dolmen Heritage Park at Juffain along the SMJAH. g. Development of programs for local population and a sustainable site. h. Complete integration of MoTA, DoA, Yarmouk University, GoJ, Jordanian Ministries, ICOMOS and NGO's.

Project Title	تطوير فيروس تبقع البندورة كجزيئات نانوية طبيعية لحمل وايصال الدوائر والتصوير الجزيئي
Principle Investigator/ Faculty	د. علاء احمد علي الجبالي
Section	الصيدلة
Number of Project	18/2017
Project Objectives	TSWV virus was recorded for the first time in Jordan in 2006 on tomato plants with severe symptoms reported in many farms in Jordan Valley (Anfoka et al., 2006). TSWV is efficiently transmitted by thrips and has a wide range in both crops and weeds (Whitfield et al., 2005b). TSWV, has a very wide host range from tomato, tobacco, green pepper, watermelon and potato Tomatoes are among the most common vegetables grown in Jordan. Furthermore, in 2003, tomatoes in many farmers along the Jordan Valley were found to have necrotic and distinctive chorotic ring patterns. In 2004 and 2005, severe disease symptoms resembling those caused by TSWV severe necrotic lesions were reported which often resulted in in plant death. As this

	is the first study on exploring the potentials of TSWV toward finding a proper nanoparticle, either for pesticide delivery or inhibiting the viral replication machinery is the ultimate goal on the long term. Therefore, on the short term, there are two objectives in this study by converting disease into commodities: 1. To isolate TSWV virus by collecting leaves from infected plants along the Jordan Valley region. 2. To utilize the virus into nanotemplates by exploring the surface exposed amino acids as carrier for cancer drugs and molecular imaging
Funding Agency	YU
Project Partners	د. يزن العكام، د. اسامة ابو الرب
Project Budget	9690
Milestones and expected result	It is expected that we will be able to introduce brand new plant virus as a tool of nanomedicine by using its surface to deliver drugs to the desired cells. The first stage will be studying this model *in vitro* and will be followed in the future *in vivo*. We are expecting to get a paper out of this project.

Project Title	العلاقة بين حدوث طفرة فى الحمض النووي لميتروكندريا الحيوان المنوي فى الانسان والعقم الذكوري الناتج عن ضعف حركة الحيوانات المنوية في وحدة الاخصاب الخارجى التابعة للخدمات الطبية الملكية الاردنية
Principle Investigator/ Faculty	د. خالد مبارك البطاينة
Section	العلوم الحياتية
Number of Project	19/2017
Project Objectives	1. To detect human mitochondrial DNA deletions in Asthenozoospermic patients at IVF units in JRMS 2. To investigate the association between human mitochondrial DNA deletions and Asthenozoospermia. 3. To evaluate the use of this association as a pre-diagnostic tool in male infertility.
Funding Agency	YU
Project Partners	د. بهاءالدين محمد امين الطراد، د. مظهر سليم سعود الزعبي
Project Budget	9440
Milestones and expected result	This research looking for the reasons of male infertility, Based on literature Review of related studies have been done in UK, Australia, Italy and china,

	they have found that there is an association between human mitochondrial DNA deletion in sperm and asthenozoospermia, so we expect to find a strong association between mtDNA deletion in sperm and reduced sperm motility among infertile males with asthenozoospermia in Jordan population, since this study is considered the first study in Jordan.

Project Title	العلاقة بين الاختلافات الوراثية لجينات انترلوكين ١ ومستقبل فيتامين د مع تهتك الغضاريف في العمود الفقري في المجتمع الاردني: دراسة ضابطة
Principle Investigator/ Faculty	د. خالد مبارك البطاينة
Section	العلوم الحياتية
Number of Project	20/2017
Project Objectives	1. Genotyping IL-1α, IL-1β, and VDR genes polymorphisms (Table1.) in Jordanian population (in IDD patients as well as in normal people). 2. Comparing the genetic variations in the normal population with that in patients. 3. Determine the genetic variation that plays a significant role in the manifestation of the disease.
Funding Agency	YU
Project Partners	
Project Budget	9290
Milestones and expected result	The selected polymorphisms rs1800587 (C-889T) of Interleukin-1 Alpha (IL-1α), rs1143634 (C-3954T) of IL-1β and rs2228570 (T-2C) and rs731236 (T-352C) of Vitamin D Receptor (VDR) will be examined in Jordanian population, in IDD patients as well as in the control group, and the potential association of these polymorphisms with IDD disease in Jordanian population will be investigated and determined.

Project Title	الكشف عن تداخلات جديدة لجينات (BDNF), (MTHFR) عند المرضى المصابين بمرض السكري (النوع الثاني)
Principle Investigator/ Faculty	د. الاء مخيمر صالح يحيى
Section	الصيدلة
Number of Project	21/2017
Project Objectives	- to describe the prevalence of depression and cognitive function impairment

	- to determine Brain-derived neurotrophic factor (BDNF)-Val66Met polymorphism Methylene-tetrahydrofolate reductase (MTHFR) - 677CC polymorphism genotypes frequencies. - to investigate the association between positive diagnosis of depression and/or cognitive impairment and the carried genotype. - to provide an analysis of the study outcomes in relation to clinical data including, glycemic level, body mass index(BMI) - to review pharmacological intervention options in the light of the study results. - Based on preliminary results the project objective might extend to include a sample of breast cancer patients with and without DM2, which allows a comparative evaluation of the studied gene implications.
Funding Agency	YU
Project Partners	Prof. Rheinhard Lange University ofMontpellier –France Ghaith Al-Taani Dr. Nesreeen Sadeh Dr. Othamn BaniYunes Dr. Dima Al-palus Dr. Osama Al Sharah
Project Budget	9800
Milestones and expected result	Positive diagnosis of depression and/or cognitive function in a number of type 2 diabetes mellitus. - A difference between serum BDNF levels in subjects with or without type 2 diabetes mellitus. - An association between the type of studied genotype and the presence of depression and/or cognitive function in a number of type 2 diabetes mellitus. - An association between the type of studied genotype and clinical data of patients with of type 2 diabetes mellitus.

Project Title	تحليل مورفومتر لترتيب اولويات المخاطر الجيولوجية باستخدام نظم المعلومات الجغرافية لاحواض مائية محتارة في الاردن
Principle Investigator/ Faculty	د. مهيب عواوده
Section	علوم الارض والبيئة
Number of Project	22/2017
Project Objectives	- analyzing the geomorphometric parameters of the watersheds including selected linear areal shape and relief parameters using topographic maps and GIS - Identify the sub-basins which are insecure or expond to erosion flood hazards -characterizing the drainage networks and their relations with lithology -Validation of geological hazards prioritization through remote sensing data and field in spection
Funding Agency	YU
Project Partners	
Project Budget	7200
Milestones and expected result	- Geohazards maps of soil erosion for each watersheds -Geohazards maps of flash floods for each watersheds

Project Title	تكنولوجيا التخفي عن الرادار: تاثير حرارة البلازما على امتصاص وتشتت امواج الرادار
Principle Investigator/ Faculty	د. محمد سالم محمود بواعنه
Section	الفيزياء
Number of Project	23/2017
Project Objectives	The proposed research will study the thermal effects on microwave absorption and scattering in plasma as a radar absorbing material (RAM). This research will attempt to put forward a novel description of the refractive index of the RAM by real plasma index that takes into account the plasma density, temperature and magnetic field within the kinetic model. Such parameters are normally present in the plasma and are usually given approximate description in existing theory (For example the SMM approximation for the density inhomogeniety[2, 3]).
Funding Agency	YU
Project Partners	
Project Budget	2200

Milestones and expected result	1. Determination of absorption rates of RF waves in kinetic plasma. 2. Establishing a database for wave absorption, reflection and transmission from a stealth plasma cloud with different properties as a RAM material.

Project Title	GIS - Based Flood Risk Assessment in Ain Ghazal Sub- Catchment Greater Amman Municipality
Principle Investigator/ Faculty	د. مهيب محمد عواوده
Section	علوم الارض والبيئة
Number of Project	24/2017
Project Objectives	The main objective of the proposal study is to conduct a GIS based flood risk assessment of Ain Ghazal sub-catchment by which a flood hazrard and a flood risk maps can be developed based on spatial flood risk index map
Funding Agency	YU
Project Partners	د. خلدون القضاه
Project Budget	1700
Milestones and expected result	- flood hazard map for the study area - flood risk for the study area

Project Title	اثر تناول الوجبات السريعه على مستوى انزيمات الكبد لدى طلاب الجامعات في شمال الاردن
Principle Investigator/ Faculty	د. معاوية محمد خطاطبة
Section	العلوم الطبية الاساسية
Number of Project	25/2017
Project Objectives	Objectives 1. Determine the effect of fast food consumption on liver functions among University students in northern Jordan 2. Identify the impact of fast food consumption on lipids profile among University students in northern Jordan 3. Evaluate the association between socio-demographic characteristics and eating habits
Funding Agency	YU
Project Partners	
Project Budget	5460
Milestones and expected result	A certain degree of association between fast food and increased lipids level and impaired liver function is expected. However, the nature of this phenomenon needs explanation. Moreover, eating habits are expected to be affected by socio-demographic characteristics of individuals.

Project Title	Studying the effect of Electromagnetic Radiation Represented by Cell phone Towers by Evaluating the Activity of Serum Glutathione s Tansferase and Serumamyloid A
Principle Investigator/ Faculty	د. يزن العكام
Section	العلوم الصيدلانية
Number of Project	26/2017

Project Objectives	Studying the effect of electromagnetic radiation through studying the activity of glutathione s transferase (GST) enzyme and Serum amyloid A (SAA) protein
Funding Agency	YU
Project Partners	د.علاء الجبالي،د. اسامة ابو الرب، د. حسن الحمود، د. ضرار العمري
Project Budget	9415
Milestones and expected result	The Serum amyloids and GST activities are influenced by the energy of the EMF. The result of his study may build the bases for the distribution of the cellular towers in Jordan to reduce the toxicity

Project Title	Termiantion Level of Conus Medullaris in Jordanian Age Related Study
Principle Investigator/ Faculty	د. رمادا راتب خصاونه
Section	العلوم الطبية الاساسية
Number of Project	27/2017
Project Objectives	To investigate the change of conus medullaris termination level in neutral position and to analyze the effects of age and gender on the conus medullaris termination level.
Funding Agency	YU
Project Partners	
Project Budget	1900
Milestones and expected result	The location of conus medullaris according to age and gender is changing based on age and gender

Project Title	دراسة مقدار تعرض عمال المختبرات الطبية لاشعة غاما من المواد الطبية السمتخدمة في المختبرات والاجهزة الطبية باستخدام مطياف اشعه غاما
Principle Investigator/ Faculty	د. منال جمال عبد الله
Section	الفيزياء
Number of Project	28/2017
Project Objectives	Measurements of gamma radiation levels in medical materials used in laboratories and medical devices used in hospitals and medical centers in Jordan and estimation of workers exposure using Gamma ray spectrometry. This gives us information if there is a high risk from the radioactive nuclei in the medical materials. - Calculating the activity concentration, the External Hazard (Hex), and the Internal Hazard (Hin). - Analyzing the results and proposing if there were effects from these radioactive nuclei.
Funding Agency	YU
Project Partners	
Project Budget	4700
Milestones and expected result	Radiation levels increased in the recent decades rapidly because of its wide applications in our daily life. These radiations were detedcted before in food, soil, and water with different values. I expect to find gamma ray radiation in the medical materials described above.

Project Title	دراسة التأخير في استجابة الحساسات الطبية بسبب تغليفها بمواد متوافقة مع الجسم
Principle Investigator/ Faculty	د. عوض سميران الزبن
Section	هندسة النظم الحيوية
Number of Project	29/2017
Project Objectives	1- Build generalized model of biomedical sensors response that includes effect of packaging 2- Investigate Cole-Cole diagram of different biomedical sensors under known and controlled excitation
Funding Agency	YU
Project Partners	د.هيام حمد القرعان، د. قاسم قنانوه
Project Budget	8500
Milestones and expected result	We expect to build a model for biomedical sensors that can be used to estimate the delays in the sensor response due to packaging material. Which can lead to using different packaging material without being worried about the delay in the response time delays. In addition, we expected to find a relationship of distributed relaxation times using Cole-Cole analysis.

Project Title	دراسة مصير و سمية جزيئات الذهب النانوية في الفئران البيضاء
Principle Investigator/ Faculty	د. اسامه يوسف ابوالرب
Section	الممارسة الصيدلانية
Number of Project	30/2017
Project Objectives	The present study will be conducted to examine the biodistribution, physiologic and metabolic effect of AuNPs on various mouse body organ systems. Enzymes and proteins involved in fat and glucose oxidation are pivotal (key) for the regulation of various mouse body organ systems metabolism and physiology. The effect of the nanoparticles on the activity of aforementioned proteins and enzymes are still not well characterized. Any dysregulation of these enzymes can lead to metabolic disorder which results in metabolic diseases like obesity and diabetes. • NPs retention within body tissues will also be investigated along with the cytotoxic effects (enzyme levels as described in section 1) of different doses of AuNPs upon single intravenous administration in mice. Therefore, the

	injected particles will be traced over considerably long period (3-6 months) to establish the fate of such particles *in vivo*.
Funding Agency	YU
Project Partners	د. يزن العكام،خالد بطاينة، د. علاء الجبالي
Project Budget	9240
Milestones and expected result	The possible toxicity of the nanoparticles will be speculated and later be the basis for further scientific research

Project Title	تأثير مكملات الكافيين على الهرمونات المنتجة للطاقة بعد اختبار كوبر لدى عدائي المسافات المتوسطة
Principle Investigator/ Faculty	د. محمد فايز عبد اللطيف ابو محمد
Section	علوم الرياضة
Number of Project	31/2017
Project Objectives	
Funding Agency	YU
Project Partners	
Project Budget	1000
Milestones and expected result	

Project Title	The imapact of long term Expoure to Sulfur Springs on Nitric Oxide Levels and Anti- inflammatory effect
Principle Investigator/ Faculty	د. زيد نايف الطعاني
Section	العلوم الطبية الاساسية

Number of Project	32/2017
Project Objectives	The main objectives of this study is to: 1. Study the effect of long term H2S- emitted from sulfur spring in EL-HAMMA population in into their NO-levels. 2. Determine if an interaction, either direct or indirect, occurs between H2S and NO, and if so, what the potential of this interaction on anti-inflammatory function are. 3. Measure the inflammatory related disease occurrence (prevalence & incidence) in El-HAMA residence.
Funding Agency	YU
Project Partners	
Project Budget	9800
Milestones and expected result	This study would provide us with novel insight if cross-talk does in fact occur between long term H2S exposure and the basal production of NO levels, in addition to the overall effect on inflammatory regulation.

Project Title	تصوير طبقي محوري لاصوات القلب
Principle Investigator/ Faculty	د. محمد عبد الله الجراح
Section	هندسة الحاسوب
Number of Project	33/2017
Project Objectives	Functional heart imaging plays a major role in the diagnosis of heart valves functionality. If the diagnosis of the valve is abnormal, functional imaging helps in determining the degree of its abnormality and severity of the problem. Furthermore, it could help in catheterization planning and/or valve replacement surgery. Functional heart imaging is the best method for detection failure or abnormality in the functionality of the heart and determines its status. The data acquired by the functional heart imaging gives clues about the health of the heart valves. The project main motivation is to provide a new, fast, and real-time functional heart imaging techniques which based on the acquired PCG signal

	using non-uniform microphones array. This technique is proposed to improve the diagnosis of the heart valves conditions. In addition, the proposed system provides a new method for imaging based distributed sound sources.
Funding Agency	YU
Project Partners	
Project Budget	9900
Milestones and expected result	Provide new heart imaging technique. - Providing new sound source localization and image reconstruction technique. - Proof our proposed simulation of the new heart sound imaging using real human chest phantom. - The results of phantom based tests will be used to approve clinical test of the proposed system

Project Title	دراسة نسيجية وبيوكيميائية وجزيئية لتأثير جزيئات الذهب واكسيد الخارصين النانوية على اعتلال الكلى المبكر المصاحب لمرض السكري في الجرذان المصابة بالسكري بفعل الستربتوزوتوسين
Principle Investigator/ Faculty	د. بهاء الدين محمد امين الطراد
Section	العلوم الحياتية
Number of Project	34/2017
Project Objectives	1. To evaluate the effects of treatment with gold and zinc oxide nanoparticles from the onset of diabetes in the STZ-induced rat model of diabetic renal disease. 2. To explore the possible mechanisms by which gold and zinc oxide nanoparticles may exert their actions in the diabetic kidney.
Funding Agency	YU
Project Partners	
Project Budget	9900
Milestones and expected result	

Project Title	Simulating Genetic Toggle Switch Using RLC Electrical Circuit
Principle Investigator/	د. احمد منصور العمري

Faculty	
Section	قسم هندسة النظم الطبية والمعلوماتية الحيوية
Number of Project	35/2017
Project Objectives	Simulating the genetic toggle switch using RLC circuit helps to understand the mechanism of biological circuits and solving ODEs using hardware solvers instead of software solvers and with further research we might able to replace the work of faulty genes or a faulty protein properly by a hardware device that increase or decrease the amount of a gene expression.
Funding Agency	YU
Project Partners	
Project Budget	3000
Milestones and expected result	Proposing a hardware simulation for the genetic toggle switch network. We should show that there is a possibility to simulate genetic networks using RLC circuit that helps to understand the mechanism of biological circuits and solving ODEs using hardware solvers instead of software solvers and with further research we might able to replace the work of faulty genes or a faulty protein properly by a hardware device that increase or decrease the amount of a gene expression The major challenge in achieving this simulation is represented by the difficulty of building an appropriate circuit that simulates the response of the solved ODEs. The idea promises for much complicated circuits such as the biological clock of *Neurospora Crassa* or electrical circuit ODE solver.

Project Title	دراسة بيئة ترسيب توضعات الصخر الزيتي الايوسينية في وادي الشجرة شمال الاردن
Principle Investigator/ Faculty	د. محمود حامد محمود التميمي
Section	علوم الارض والبيئة
Number of Project	36/2017
Project Objectives	This study aims to: Provide new insights on the depositional environments of the northern Jordanian oil shale deposits where the shallow marine environment of the epi-continental sea is dominated.
Funding Agency	YU

Project Partners	د. محمد أحمد محمد القضاه
Project Budget	8920
Milestones and expected result	The expected results of study are as follows: The study will help in understanding these deposits, their nature, and presence. Oil shales of Wadi Ashajara have a good thicknesses and it belongs to Wadi Shallala Formation.

Project Title	التحليل التركيبي لطيات بيرين
Principle Investigator/ Faculty	أ.د. محمد يوسف صالح عطاالله
Section	علوم الارض والبيئة
Number of Project	37/2017
Project Objectives	The main objectives of this study can be summarized as follows: • Mapping the different structural elements within Birayn structure (synclines, anticlines, joints and faults). • Carry out three-dimensional analysis of each anticline and syncline. • Find out the relation between the folds and other structures as faults and joints. • Find out the relation if any between Birayn structure and other fold structure in north Jordan as the Shueib and Amman- Hallabat.
Funding Agency	YU
Project Partners	
Project Budget	2510
Milestones and expected result	The expected results of this study includes: • Producing geological and structural maps of the study area • Inventory of the different structural elements in the are (folds, faults, and joints) • Find out the relationship between the structure of the area and the other fold structures as Amman-Hallabat and Wadi Shueib structures

Project Title	التحليل التركيبي المتوسط لطيات عمان - حلابات جنوب غرب عمان
Principle Investigator/ Faculty	أ.د. محمد يوسف صالح عطاالله
Section	علوم الارض والبيئة
Number of Project	38/2017
Project Objectives	This study is concentrated on the meso-structures associated with the Amman-Hallabat structure in the area southwest of Amman. The aims can be summarized in the following points: • Measure the attitude of the bedding planes to find out the fold type: anticlines or synclines. • Carry out three dimensional analysis of each anticline and syncline using the stereographic projection. • Recognize, describe, and measure each meso-structural element (faults, joints, stylolites, and veins) in every outcrop. • Find out the relation between the meso-structures and the folds of Amman-Hallabat. • Deduce the stress field in the area.
Funding Agency	YU
Project Partners	
Project Budget	1560
Milestones and expected result	The expected results of this study includes: • Describe and measure the different meso-structures in the study area • Find the relation between these structures and the Amman-Halabat folds • Deduce the stress field in the study area

Project Title	التعرف التلقائي على الوجوه أثناء النزاعات الجماعية باستخدام تعلم الألة وكاميرات المراقبة الرقمية
Principle Investigator/ Faculty	د. خالد محمد عقله نهار
Section	قسم علوم الحاسوب
Number of Project	39/2017

Project Objectives	• The use of computer algorithms in serving surveillance systems • Helping security in identifying trouble makers. • Identifying individuals in mass conflicts for security follow up purposes. • Locating wanted criminals and suspected terrorists. • Locating missing persons. It may help in taking students attendance especially in large classes.
Funding Agency	YU
Project Partners	د.بلال أنس حامد ابو الهدى، د. أحمد العرود، رعد محمد علي الخطيب
Project Budget	5380
Milestones and expected result	After finishing our project and executing the required testing procedures we expect to have the following in hand: • The project is expected to have good implications in areas such security and criminal investigation • A complete working model for face detection and recognition in the academic areas • Publishing several research papers in the field. • Future research work for improving such security solutions. Open new trends and ideas in the field of social security.

Project Title	Mossbauer Spectroscopy Study of M-Type Hexaferrite (BaFe12xO19) Prepared by Sol-Gel Method
Principle Investigator/ Faculty	أ.د.عبدالفتاح ذيب اسعد لحلوح
Section	الفيزياء
Number of Project	40/2017
Project Objectives	Ferrites in general and M-type hexaferrites in particular are continued to be very important materials for their technological applications due to their electrical and magnetic properties. □□BaM type hexaferrite can be prepared by different method; sol-gel methodis the most versatile method which promising prospect due to its inexpensiveprecursors, easy operation, controllable conditions and ultrafine size of the obtained products. □□Mössbauers pectroscopy is important technique to prope the sites occupancy of Fe ions and accordingly the substituent cations.
Funding Agency	YU

Project Partners	الطالبة هيئات محمد الشبول
Project Budget	900
Milestones and expected result	Sintering the samples Recording the XRD patterns and the Mossbauer spectra. Analyzing the data. Submitting the student (Hayaat Al-Shboul) Master Thesis. Later, preparing and publishing this work in a reputed specialized Journal.

Project Title	Next-Teneration OLEDs with Superior Efficiencies
Principle Investigator/ Faculty	د. عبدالمنعم الرواشده
Section	الكيمياء
Number of Project	41/2017
Project Objectives	This project aims to discover new organic rare earth-free phosphors materials that out-perform conventional, Ir-based phosphors. Synthesize light-emitting and charge-transporting organic materials that contain significantly less expensive, more abundant, and more green elemental compositions than ones used in the state of the art materials. Utilize simpler device structures and film fabrication processes that are more suitable for mass production of versatile products than the current state of the art.
Funding Agency	YU
Project Partners	Mohammad Ayman shafiq Omary
Project Budget	9960
Milestones and expected result	Scientific outcomes: (a) Synthesize light emitting and charge-transporting organic materials that contain significantly less expensive, more abundant, and more green elemental compositions than ones used in the state of the art materials; (b) Utilize simpler device structures and film fabrication processes that are more suitable for mass production of versatile products than the current state of the art; and <u>Projected timeline (This year) :</u> Year 1: - Quarter 1: The PI will order the OLED measurement system, equipment's and all other materials. - - Quarter 2: The PI will recruit (one) 1 research assistant technician (MSc degree holder), to add to the project team and to synthesize the material needed for the novel OLED devices.

	- - Quarter 3: OLED fabrication by the research assistant and the graduate students to implement the device designs and concepts supervised by Co-PI Omary. The work will continue in the fourth quarter of this year - - Quarter 4: fabrication of OLED devices based on potential phosphorescent materials collected and screened from Colleagues and researchers in Jordan.

Project Title	بحث التأثير العلاجي لفيتامين (د) على تطور سرطان الثدي من خلال تعديل مستقبلات الخلايا السرطانية
Principle Investigator/ Faculty	د.ليلى محمود علي مطالقة
Section	قسم العلوم الطبية الاساسية
Number of Project	42/2017
Project Objectives	**1.** To investigate the prevalence of vitamin D deficiency among different histopathological types of breast cancer according to receptor status (ER, PR, and HER2 receptors) **2.** To link the level of vitamin D deficiency to many clinical and laboratory parameters (Stage of cancer, Type of cancer metastasis, and Receptor expression) **3.** To reveal the effect of supplement high dose of vitamin D in the progression of breast cancer and detect any histopathological change in the cases. Another objective: To investigate the prevalence of osteoporosis among BC patients
Funding Agency	YU
Project Partners	د. علياء المحتسب د.عدنان السعد, د.خلدون محمود طالب ردايدة,د.روماني حلمى ثابت جرجس
Project Budget	25554

Milestones and expected result	This study will assess the level of vitamin D deficiency among different histopathological groups of breast cancer patients. After identifing group with insufficient vitamin D level and interventional supply of vitamin D, it will be expected a change in estrogen receptor expression among ER negative breast cancer and its impact on disease progression; stage, tumer size and others.

Project Title	وصف جينات العدوى والاستجابة للمضادات الحيوية لدى مرضى المسالك البولية الأردنيين المصابين ببكتيريا Proteus mirabilis
Principle Investigator/ Faculty	د. خالد مبارك البطاينة
Section	العلوم الحياتية
Number of Project	43/2017
Project Objectives	1. Determine the prevalence of the uropathogenic *Proteus mirabilis* strains isolated from UTIs patients by the detection of several *Proteus mirabilis* virulence genes. 2. Characterize the antibiotic susceptibility profile of *Proteus mirabilis* isolates and to correlate results with the presence of urovirulence genes.
Funding Agency	YU
Project Partners	د. عماد ابراهيم سليمان حسين
Project Budget	9900
Milestones and expected result	The antimicrobial susceptibilities and virulence factor profiles of Proteus mirabilis isolates causing UTI will be determined. In addition, the associations of virulence genes with isolates' antibiogram profiles will be

	investigated and determined. Finally, the rates of drug and multi-drug resistance will be reported, hopefully the associations between virulence factors and resistance phenotypes will be identified.

Project Title	Smart PV Powered LED Lighting with Battery Monitoring System
Principle Investigator/ Faculty	د. علاء رائف توفيق السعيد
Section	قسم هندسة القوى الكهربائية
Number of Project	44/2017
Project Objectives	The goals of this project are as follows: 1) Design an integrated smart PV-powered lighting system with components. 2) Reduce the building and street lighting costs at Yarmouk University new and old campuses.
Funding Agency	YU
Project Partners	
Project Budget	20000
Milestones and expected result	The expected outcome of this project is to achieve significant reduction in electricity bill of Yarmouk University by: 1) storing PV energy in batteries and using this free energy during night, and 2) integrating motion sensors that allows the lights to turn on only if a moving object is detected and hence minimizing the idle times of these lights. In addition, it is expected that this project will produce at least 2 journal papers and a number of conferences papers as well as a number of graduation projects and/or master's theses.

Project Title	Provenancing Marble Sculptures from the Eastern baths at Gerasa, Jordan
Principle Investigator/ Faculty	د. خالد شنوان البشايرة

Section	صيانة المصادر التراثية وادارتها
Number of Project	45/2017
Project Objectives	The Project aims to 1- Characterize the marble sculptures. 2- Determine the sources of the marble sculptures. 3- Suggest the trade routes and economic connections of Gerasa and marble provenances used at the time of baths construction. 4- Contribute to general understanding of marble use during classical periods. 5- Provide the sites conservators with the types of marbles that can be used in the conservation of the sculptures.
Funding Agency	YU
Project Partners	Thomas Weber,نزار أبو جابر , Dr. Thomas Lepaon
Project Budget	3400
Milestones and expected result	Mainly the marble for sculpture was made of dolomitic marble brought from Thasos- 3 quarries, Thasos Island, Greece. So it is expected that these sculptures might be from Thasos quarries. However, other sources were used for sculpture like Docimium, Penteli and Proconessus.
Project Title	مشكلات التعايش التي يواجهها الطلبة اللاجئين ودور كتب التربية الوطنية والمدنية في تعزيز قيم التعايش السلمي
Principle Investigator/ Faculty	د. هاني حتمل عبيدات
Section	قسم المناهج وطرق التدريس
Number of Project	46/2017
Project Objectives	- معرفة درجة توافر قيم التعايش السلمي في كتب التربية الوطنية والمدني من خلال تحليلها ومن ثم التخطيط لتضمينها في هذه الكتب - الوقوف على ابرز مشكلات تعايش الطلبة اللاجئين من خلال مقابلات معهم وإجراء توصيات للمختصين للوقوف عليها ومحاولة معالجتها ووضع الحلول الممكنة لها
Funding Agency	YU
Project Partners	الطالبة نجاح عبدالله مصطفى عمايره

Project Budget	1000
Milestones and expected result	- معرفة درجة توافر قيم التعايش في كتب التربية الوطنية وتضمين ما نسبته قليله في الكتب . - معرفة أهم مشكلات الطلبة اللاجئين . - تحديد الأولويات من المشكلات . - توصيات لأصحاب الاختصاص لوضع حلول لمشكلات الطلبة اللاجئين . - تضمين كتب التربية الوطنية والمدنية بقيم التعايش السلمي والحوار مع اللاجئين .

Project Title	تشخيص حالات توقف التنفس أو ضعفه اثناء النوم عن طريق الإشارات الطب-حيوية والمعلومات الديمغرافية
Principle Investigator/ Faculty	د.عبدالرؤوف خالد بصول
Section	الطب
Number of Project	47/2017
Project Objectives	The following goals and objectives are intended in this proposal: **1.** Building a database for sleep patients. There are several publically available and standard databases that can be found on the internet for sleep apnea, such as MIT Physiobank. However, these datasets does not contain other related factors for sleep disorder such as obesity and smoking information. In this research, we will create a dataset that contains the patient's vital biomedical signals along with demographic information and answers to a predefined questions. The database will be publically available for any researcher. **2.** Implement a simple, comfortable and less expensive model for sleep apnea diagnostic. Computer algorithms are a scientific field that grows faster than reading this line. The field is very generic, dynamic and authentic from mathematical point of view. On the other hand, the medical field of sleep monitoring is also growing faster than the blink of an eye. In this research we will integrate the knowledge of the two fields in a model that is capable for detecting the apnea in home settings. The system will depend on some vital signals as well as other information. The system will communicate the patient information wirelessly with a sleep expert for further health consultation. **3.** Investigating the risk factors that causes sleep apnea disease. **4.** Reduce the number of hospital visits since the model can communicate the data wirelessly to an expert physician.

Funding Agency	YU
Project Partners	فيصل قسيم خليل الخطيب، محمد عبدالكريم القضاة
Project Budget	9050
Milestones and expected result	The consequences of the objectives result from the emanation of this research are several scientific, developmental and applicable outcomes. The following is a complete list of the outcomes: A. <u>Scientific outcomes</u> **1-** An automated system that provides patients with concise and informative information about sleep disorder. **2-** Participating in top tier conferences to present important findings and share ideas with other researchers work in the same domain. **3-** Top tier journals will be mandated to publish the results of the proposed system. B. <u>Applicable outcomes</u> **1-** Automated sleep apnea detection system that supplements experts (doctors) with important information about a patient regarding sleep apnea severity (e.g AHI index) to increase the throughput of physicians and decrease inaccurate diagnostics. **2-** A diagnostic tool for sleep apnea detection based on several decision rules. **3-** The tool can be used by physicians to take predefined actions according to the outcome. C. <u>Developmental outcomes</u> 1- Provide students with tutorials and seminars about biomedical signal and image processing algorithms and tools. 2- A publically available database that contains important biomedical signals as well as demographic information about cases suffer from sleep apnea. 3- Increase the technical knowledge of physicians and decrease the ambiguity of health care procedures to computer scientists.

Project Title	نظام المنازل الذكية لذوي الإحتياجات االخاصة بإستخدام الواجهة الصوتية والتحكم عن بعد بإستخدام حركة العين
Principle	د. احمد فضل كليب

Investigator/ Faculty	
Section	قسم نظم المعلومات الحاسوبية
Number of Project	48/2017
Project Objectives	This project aims to help elderly and people with disabilities to live more independently and have the ability to be transformative by allowing them to take control of different home appliances, such as unlocking doors, turn on and off TV, lights, air-condition, heater, fan, electric curtains, etc. It aims to develop a prototype of smart home for elderly and disabled people using the Internet of Things technology (IoT) to control the home appliances by using either a web page, mobile application, or the added voice and eye tracking interfaces that accept voice commands and eye movement tracking.
Funding Agency	YU
Project Partners	
Project Budget	9570.5
Milestones and expected result	1. This research is expected to produce a prototype of smart home for elderly and disabled people using the Internet of Things technology (IoT) to control the home appliances by using either a web page, mobile application, or using the added voice and eye tracking interfaces that accept voice commands and eye movement tracking. In future, this research can be developed as a next stage to implement the fifth and sixth phases of work plan and procedure of this research which aims to produce a real product and then sell it in the local market.

Project Title	مدى الاختلاف في مستوى النيكوتين ومستوى فيتامين"د" لدى مدخني السجائر والارجيلة في شمال الاردن
Principle Investigator/ Faculty	د. معاوية خطاطبة
Section	الطب
Number of Project	49/2017

Project Objectives	1. Identify blood Nicotine level among cigarette and water pipe smokers in Northern Jordan 2. Identify vitamin D level among cigarette and water pipe smokers in Northern Jordan 3. Assess differences in vitamin D levels between cigarette and water pipe smokers
Funding Agency	YU
Project Partners	د.وليد محمود حسين المومني، د. زيد الطعاني
Project Budget	9950
Milestones and expected result	A certain level of difference in vitamin D levels is expected between cigarette and water pipe smoking. However, this result needs explanation. Moreover, Oxygen saturation levels are expected to vary between cigarette and water pipe smokers. Moreover, smoking habits are expected to be affected by socio-demographic characteristics of individuals.