Educational systems based on practical practices for solving environmental problems

The University adopts some practical practices for solving environmental problems in its educational systems. Here are some examples of these systems in some colleges:

Faculty of Education:

The Faculty of Education at Assiut University adopts a special fee-based program in English through the Bachelor of Science and Education (STEM: Science, Technology, Engineering, and Mathematics) in the specializations of Physics, Chemistry, Biology, Geology, and Mathematics. Teaching students through environmental projects as outputs of the accompanying curriculum activities, which are evaluated by experts specialized in environmental education and sustainable development from the faculties of science, engineering, and agriculture.

Faculty of Agriculture:

It has implemented one of the modern educational systems that rely on practical practices to solve problems. Therefore, the college has directed its efforts towards training students from the Rural Community and Agricultural Extension Department on real problems existing on the ground and working on using modern scientific methods to find appropriate solutions for them.

A greenhouse specifically for students was established, where environmentally friendly plants and trees are cultivated. The students, under the scientific supervision of the university and the college, plant these plants according to the previously identified environmental needs. After the success of this activity, a new greenhouse for ornamental, medicinal, and aromatic plants was established to preserve rare species of plants and trees, and it was inaugurated in 2022.

- The university has established an oil extraction unit at the Faculty of Agriculture to provide a healthy and safe product from medicinal plant oils. The cost of the unit exceeds two million pounds and includes the latest devices used in the extraction and distillation of aromatic and plant oils, as well as the production of oils extracted from various types of crops, which are used for medical and nutritional purposes .

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The automatic milking parlor was inaugurated at the livestock farm of the Faculty of Agriculture.

Assiut University launches the National Laboratory for Infectious Disease Research with Biosafety Level 3 (BSL3), funded by the Science, Technology, and Innovation Funding Authority at a

cost of 200 million Egyptian pounds. It is considered one of the most important requirements for scientific research in the field of biological sciences, as biosafety laboratories play a vital role in dealing with biological risks. This is achieved through conducting scientific research aimed at understanding these risks and developing methods to address them, in addition to developing new vaccines and medicines to treat infectious diseases.

-Assiut University signs a cooperation agreement with Assiut Oil Refining Company and the Egyptian Gulf Company for Desert Land Reclamation in the field of cultivating jojoba and industries based on its oil .

1-Agreement to cultivate 10 acres at the Faculty of Agriculture farm, with the faculty providing the area (10 acres) and the Egyptian Gulf Company supplying the seedlings required for planting.

2-The possibility of opening funding or rewards for the researchers regarding the jojoba crop research after publishing the studies and presenting them to a specialized committee from the company.

3-The Faculty of Agriculture has already planted 10 feddans at the scheduled times for the jojoba crop under the supervision of the college's specialized professors.

Institute of Molecular Biology:

The Institute of Molecular Biology offers innovative solutions to address environmental issues through the scientific theses registered by students, such as: Experimental trials for reduction of vincristine sulfate neurotoxicity: Molecular approach

1- Production, characterization and some biological applications of fungal amylases.
2- Integration of systems biology approaches with lipid metabolism.
3- Auto calculation of Genetic diversity measures based on Molecular markers data
4- A gel analysis tool for electrophoresis troubleshooting of molecular markers products.
5- Pooling of samples for testing SARS covid 19 RNA in asymptomatic healthcare workers.

The institute consists of three main departments, each based on educational systems that provide solutions to environmental problems, namely :

- Molecular Biology Department .

Based on Ministerial Decree No. (2288) issued on 27/7/2020, Article (13) of the internal regulations of the Institute of Molecular Biology Research and Studies – Assiut University (postgraduate stage) under the credit hour system issued by Ministerial Decree No. (3083) dated 31/7/2019. A new sub-specialization under the name (Molecular in vitro Fertilization) will be added as follows :

The following sub-specialties: Molecular Microbiology – Molecular Immunology – Molecular Pathology – Molecular Diagnosis of Living Organisms' Diseases – Molecular in Vitro Fertilization .

- Department of Biostatistics and Applied Bioinformatics .

Based on Ministerial Decision No. (5822) issued on 31/12/2019, the name of the (Department of Biostatistics and Bioinformatics) has been changed to (Department of Biostatistics and Applied Bioinformatics) as stated in Article (13) concerning the scientific departments of the institute from the internal regulations of the Institute of Research and Studies in Molecular Biology – Assiut University (Graduate Studies Stage) under the credit hour system issued by Ministerial Decision No. (3083) dated 31/7/2019 .

It includes the following sub-specializations: Biostatistics - Bioinformatics .

The Department of Applied Biotechnology .

It includes the following sub-specialties: Microbial Biotechnology – Plant Biotechnology – Animal Biotechnology – Pharmaceutical Industries – Food and Dairy Biotechnology – Environmental Biotechnology.

Faculty of Computers and Information

The educational practices based on practical activities for solving environmental problems are evident in the field training course (practical education) assigned to third and fourth-year students at the Faculty of Computers and Information. Through this course, the college students participate in all activities of the Ministry of Education schools and contribute to awareness efforts.

Appendix :

Research project titled "Developing a Big Data Platform to Map Epidemic Spread for Tracking the Epidemic in Time and Geography," within the framework of the Corona grant, presented by Prof.Dr. Taysir Hassan Abdel Hamid is acting Dean of the Faculty of Computers and Information at Assiut University in collaboration with His Excellency the Deputy Prof.Dr. Maha Ghanem, Vice President of Assiut University for Community Service and Environmental Development and Professor of Chest Diseases at the Faculty of Medicine, Assiut University.Dr. Dr. Omayma El-Gabali, Professor of Public Health at the Faculty of Medicine, Assiut University, and a team from the Faculty of Computers and Information at the university, and Dr. Mohamed Zain El-Din, the Undersecretary of the Ministry of Health in Asyut Governorate, aims to build a platform for analyzing and visualizing large-scale data of various types, including patient data, using artificial intelligence algorithms and data science. This platform will be provided to a group of beneficiaries, including doctors, decision-makers, and

patients, with rooms for dialogue and text analysis in Arabic and English. This will help achieve economic impact by assisting decision-makers in identifying the areas with the highest disease prevalence and diagnosing new disease cases. The first meeting was held between the members of the research team at the Health Directorate in Assiut to discuss the implementation mechanism, and it will be applied to Assiut Governorate as a model. This project is considered one of the most important research projects.

College of Physical Education:

استمارة التسجيل: (مسابقات أوراق السياسات) : العام الجامعي ٢٠٢٢/٢٠٢٣

تابع: قائمة بيانات الفرق المشاركة في مسابقة أفضل ورقة سياسات:

الفريق	موضوع ورقة السياسات	أعضاء الفريق البحثي	رقم الموبايل	مرحلة جامعية	المشرف الأكاديمي
التاسع	تطبيق مرشد للطلاب من مرحلة ما بعد الثانوية مرورا بالمرحلة الجامعية الى التخرج	أحمد محمد أبوالمكارم محمود	01148766583	بكالوريوس	د/ نجلاء حسين محمد توفيق
		كريم عبدالناصر محمد عبداللطيف	01102913540	ليسانس	
		ريهام مصطفى جمال محمود	01117628785	بكالوريوس	
		إسراء حسين علي	01003239301	بكالوريوس	
		محمد سلامة حسين محروس	01551534789	بكالوريوس	
العاشر	انشاء كلية لريادة الأعمال - بعيدا عن الموازنة العامة للدولة -	محمد عصام الدين رجب حسين	01002462144	دراسات عليا	د/ محمد محمود صلاح قراعة
		حسام محمد محمد حسن	01555323111	دراسات عليا	
		محمد قراعه عبد الرحمن اسماعيل	01110047410	هيئة معاونة	
		ايمان السيد محمد السيد	01066034037	هيئة معاونة	
		مارينا وليم وليد متري	01278118231	بكالوريوس	

د/ أحمـــــد عـــــلام
منسق جامعة أسيوط لمبادرة شباب من أجل التنمية