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**THE IMPACT RANKING**

# SDG11

SUSTAINABLE CITIES AND  
COMMUNITIES

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AND COMMUNITIES**



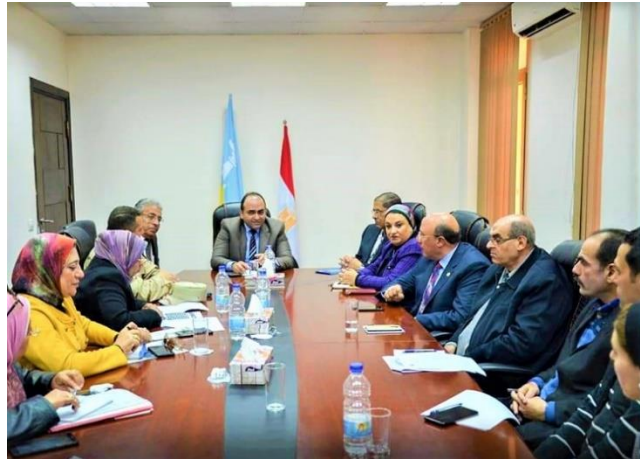
## SDG 11 – Sustainable Cities and Communities

### 11.1. Workshops/Conferences:

- In the academic year 2019- 2020, Staff members of the faculty of Applied Medical Sciences Technology coordinated a **workshop** “ Sustainable clean Environment” . This workshop was carried out jointly with Alexandria Governorate, Kim Company for petroleum services, Ministry of Environment.

### 11.2. Activities:

- **The Community Service and Environment Development Affairs and the Community Service and Environmental Development Centre (CSED), Pharos University participated in a meeting about the “Live Green” initiative. The meeting was held in Alexandria Governorate Office on Wednesday, 12 February 2020.** The meeting aimed to discuss the mechanisms to apply the “Live Green” initiative launched by the President of Egypt to raise environmental awareness in Alexandria. The importance of the consultative role of Pharos University which came within the framework of the government keenness to achieve cooperation and integration by taking advantage of the experiences of the scientific bodies in Alexandria and working hand in hand for the benefit of the governorate was stressed. A study on “Harmonic Mechanisms for Treating all Types of Wastewater to Irrigate a Sustainable Green Belt to Protect the Vicinity of Lake Mariout.” Was presented by CSED representative. It is worth mentioning that the study impressed all the attendees and it was stressed upon the need for adopting that study by the governorate and other authorities at the local and central levels.



<https://www.pua.edu.eg/pharos-contributions-in-the-live-green-presidential-initiative/>

- The faculty of mass communication produces a short film on a film on Ecotourism on the culture and heritage of villages in upper Egypt and called “Fedalos Anay” or “We Welcome you” . The film addresses the life of these small villages that were drowned under water before and currently after saving it is sustainable. The film also covers the traditional knowledge particularly for women and its role in he day to day life.
- <https://www.youtube.com/watch?v=D6HwJvQK-Uk&list=PLsZ1HNiwxSAPBp9Ff74mHK1NbrVLCp-52&index=11>
- On 22 October 2019, staff and students of the faculty of engineering had a field visit to Transport and Engineering company to explore the sustainable use of raw materials e.g. oils, strands, reuse of water and they had a presentation on the standard procedures and methodologies for testing the materials used in this industry



### 11.3. International Mobilities

Through MOUs , the Faculty of Arts and design nominated the Teaching assistant as indicated in the table below to travel to Aristotle university for training in the field of arts and design. The candidate spent most of the time in the host university to see how the curricula in Pharos university can be developed to match the international standards and sustainable development. On his return, he was able to make changes to some topics in the undergraduate curricula to infuse sustainability to the program. Staff members – Erasmus+ (2019-2020).

Name	Title	Faculty- PUA		Host university	Travel Dates
Mohamed Osama	Teaching Assistant	Faculty of Arts and design Department of Décor		Aristotle University Greece	15 April 2019 to 19 April 2019

### 11.4. Students' Projects

Project name	Summary
Water and wastewater	Wastewater treatment is a process, which is being done on the wastewater to change its quality for drinking or other suitable purposes. Wastewater treatment takes place in wastewater treatment plants, which should be designed under different circumstances. The project contains: <ol style="list-style-type: none"> <li>1- Design intake sum pump unit.</li> <li>2- Design sedimentation tank.</li> <li>3- Design filtration tank.</li> <li>4- Design sludge treatment process.</li> <li>5- Take a case study in a new compound city.</li> </ol>
Electrical design of residential compound area with management of distributed generation and optimum power quality performance by load demand side	The aim of this power system project is to help the student in his final B.E. graduation project to apply what he has learned in the field of power systems under graduate courses. The materials included in the following requirements of the design project shall be calculated and prepared in the same structure of the typical professional jobs of electrical engineering works according to the roles of IEC standard codes.
1. IoT approach for sustainable green campus	This project proposes a complete layout for a smart green campus using IoT as a core technology. This project highlights several main features of green campus such as energy saving and efficiency water consumption. The communication technologies that will be implemented in the project layout will be RFID, Bluetooth and cloud computing. Moreover, some prototypes will be designed to validate the proposed layout
2. Design a solar hybrid air conditioning compressor system	Statistics these days say that electricity demand increase in air conditioning system, due to increasing in temperature in the most of countries, so people suffer from high electricity bills. Integrate solar devices or systems to use heat gain from sun to get electricity, and devices that we can use <b>{photovoltaic, solar collector, hybrid system}</b> .The electricity produced can be used to operate compressor that used for compressing the refrigerant in air conditioning system .Three system mentioned above, we should select the best system that give low electricity demand and high efficiency .

3. Solar trackers for hybrid power supply	This project represents a smart power supply by using solar energy as the sources. It reduces the Use of other sources in order to achieve our goal to generate electricity (during day time). The solar tracker device equipped with the project which is absorbs the ultraviolet (UV) from the sun in maximum condition. The tracker operates with single axis rotation where it can be rotating horizontal. This circuit is activated when light dependent resistor (LDR) detecting the sunshine where four sensors are placed at north and south position.
Smart traffic light	(SDG 11) Make cities and human settlements inclusive, safe, resilient and sustainable

### 11.5. Courses in curricula

There are 16 courses in 6 faculties addressing the topic of sustainable cities as indicated in the table below

	Faculty	Course name	Course code	SDG-relevancy	Topic
1	Applied Health Sciences Technology	Development and Regulation of Medical Products	MGDR-101	12	Responsible consumption and production methods
2	Applied Health Sciences Technology	Ethical and Legal Issues in Health Fields	MGME-101	12	Wellbeing and living standards
1	Pharmacy	Environment and sustainability	PMC E01	12	Sustainable ecosystem services
2	Pharmacy	Project in Pharmacognosy & Natural Products	PG E08	12	Sustainable use of natural resources
3	Pharmacy	Good Manufacturing Practices	PPC E02	12	Responsible production consumption techniques in pharmaceutical industry
4	Pharmacy	Natural Cosmetics	PGD E01	12	Sustainable use of natural resources
5	Pharmacy	Herbal medicine	PGD E02	12	Sustainable use of natural resources
6	Pharmacy	Sustainability in Therapeutics	PLD E03	12	Sustainable use of natural resources
1	Tourism	Consumer Behavior in Tourism and Hospitality (Elective)	THM 162	12	Responsible consumption and production methods
2	Tourism	Current issues in food service (Elective)	HM 336	12	Healthy food for wellbeing, consumption reduction
3	Tourism	Safe Food Service Management	HM 434	12	Healthy food for wellbeing, consumption reduction
1	Physical Therapy	Nutrition	PTBA 570	1,2	Health food for balanced nutrition
1	Engineering	Energy Systems	EE 271	7,12	Studying the availability of using PV arrays in residential & commercial areas



2	Engineering	Material science	EP 217	12	This course introduces the students to Classification of engineering materials, atomic and molecular structure. The course focuses on polymer properties and modification for special applications.
3	Introduction to environmental engineering	EP 389	12, 13	The course introduces engineering aspect with complete environmental assessments of the impacts	Introduction to environmental engineering
1	Business	Consumer behavior	BF 746	12	The course focuses on issues related to the behavior of consumption and production and means to rationalize consumption

### 11.6 Publications

<b>Framework for Interaction between Databases and Microservice Architecture</b>
<b>Kholy, M.E., Fatatry, A.E.</b>
Alexandria University
<b>IMPACT OF BUILDING REGULATIONS ON THE URBAN FABRIC OF THE CITY: CASE STUDY OF ALEXANDRIA, EGYPT</b>
<b>NADIA SAMIR, RAMADAN ABD EL MAKSOU, IBRAHIM MAAROF</b>
Alexandria university