Pharos University in Alexandria
Vice President for Graduate Studies & Research
**International Ranking Committee**

# THE Impact Ranking
# SDG7 Report

7

Affordable and
Clean Energy

# SDG 7 Affordable and Clean Energy

Pharos University in Alexandria is paying a lot of attention to affordable and clean energy issues. This is in the form of initiatives, courses, events, projects, and cooperation agreements. The following are some examples of the university's efforts to address energy.

## Affordable and Clean Energy Events

## Modern Trends in Sustainable Energy


PUA's Faculty of Engineering inaugurated the its 4th international conference under the theme *"Modern Trends in Sustainable Energy"*, in collaboration with the Royal Institute of Technology in Sweden (KTH). The conference commenced with opening remarks by Prof. Dr. Mahmoud Mohieldin, PUA's President, who emphasized the critical importance of sustainable energy in addressing today's global environmental and economic challenges. He reiterated PUA's commitment to leveraging science and technology to develop sustainable solutions for the energy sector, which serves as a cornerstone for building a brighter future for generations to come.

Prof. Dr. Mohamed Gaber Abu Ali, Vice President for Graduate Studies and Research, highlighted the multidimensional nature of sustainable energy, describing it as not only a scientific or technical matter but also a humanitarian and social one. He emphasized its essential role in achieving sustainable development and combating climate change, which poses significant threats to the planet.

Further, Prof. Dr. Mahmoud El-Meligy, Dean of the Faculty of Engineering and President of the Conference, expressed the faculty's dedication to fostering collaborations with academic, research, and industrial institutions to produce innovative solutions that align with sustainability goals. He also extended his gratitude to the Board of Trustees, PUA's President, and university leadership for their unwavering support of research initiatives and the Faculty of Engineering.

In his address, Prof. El-Meligy acknowledged the invaluable contributions of the Scientific Committee, Organizing Committee, faculty members, teaching assistants, students, and the Media Committee, who collectively ensured the success of the conference.

https://www.pua.edu.eg/modern-trends-in-sustainable-energy/

## 2nd to Future: Egypt as a Regional and Pivotal Energy Hub

The Electrical Engineering Department at PUA's Faculty of Engineering recently organized a series of scientific lectures featuring industry experts and job market stakeholders. These lectures aim to provide students with insights into industrial applications in their field of specialization and link academic study with practical experience to better prepare them for the labor market. As part of this initiative, the department held the third scientific lecture of the current semester, titled "2nd to Future: Egypt as a Regional and Pivotal Energy Hub."

The lecture was delivered by Dr. Mahmoud Al-Gammal, Professor of Electrical Power in the Electrical Engineering Department and Electrical Power Consultant, and attended by the Department head, faculty members, teaching assistants, and students. Dr. Al-Gammal discussed how Egypt managed to control the electricity crisis from 2014 onwards, highlighting nuclear energy as a strategic option for the country. He also explored the present and future of new and renewable energy, Egypt's plans to export green hydrogen globally, and electrical interconnection projects with neighboring countries.

The lecture concluded with an open discussion, where the audience engaged in a dialogue about Egypt's potential to become a regional hub for electric energy.

https://www.pua.edu.eg/2nd-to-future-egypt-as-a-regional-and-pivotal-energy-hub/

## The Architectural Engineering Department of at Pharos University held a workshop in Vienna, Austria, which tackled sustainability, recycling, and renewable energy

The Architectural Engineering Department of at Pharos University held a workshop in Vienna, Austria. 17 students from PUA participated in the workshop, in addition to 43 students from other nationalities. The workshop program provided a remarkable group of different scientific lectures, which mainly tackled the importance of sustainability, recycling, and renewable energy. In addition to their significance in maintaining the environment and individuals' general mental and physical health. Furthermore, the workshop provided a variety of valuable lectures by professors from different countries and nationalities in all disciplines related to energy and sustainability sciences.


URL: https://www.pua.edu.eg/vienna-workshop/

## A workshop on recycling LED light bulbs as a modern electricity source

**Posted On: May 13, 2024**

The Faculty of Pharmacy is actively engaged in initiatives to position PUA as a leading environmentally friendly institution. To this end, the Faculty's Community Service and Environmental Affairs Committee, under the patronage of Prof. Dr. Mohamed Etman, Acting Vice President for Environmental Affairs and Community Service, along with the Dean of the Faculty, organized a workshop on recycling LED light bulbs. This workshop was held in conjunction with PUA's Recycle It Campaign, as part of its broader efforts to attain the Green Pharos title.

URL: https://www.pua.edu.eg/recycling-light-bulb-workshop-2/

## PUA holds competition for the best community research projects

**Community Research Projects**

**Posted On: March 3, 2024**

PUA's administration has pledged to continue the journey and keep organizing its celebration to select the best community research projects, which aim to spread the competitive spirit among its students, and to commemorate its late founder, Mr. Muhammad Rajab (RIP). In this context, PUA held a final qualifier session for the best 3 community sustainable research projects for the academic year 2022/2023. This event was sponsored by the administration, and attended by vice presidents, deans and vice-deans, and experts from the labor market.

URL: https://www.pua.edu.eg/community-research-projects/

## Sustainability in Education Project
Posted On: May 13, 2024

As part of its commitment to the Sustainability in Education Project, PUA's International Relations Department concluded an agreement with Technological University Dublin (TU Dublin), a strategic partner of PUA, to provide a professional diploma program in sustainability in education. Under this agreement, PUA nominated faculty members from various faculties to participate in the program, equipping them with the essential tools to incorporate sustainability principles into their teaching methods. Over a duration of six months, these faculty members engaged in workshops and fulfilled assignments to augment their expertise and capabilities. Additionally, representatives from diverse faculties showcased their effective integration of sustainability principles into their instructional approaches.


URL: https://www.pua.edu.eg/sustainability-in-education-project/

URL: https://www.linkedin.com/posts/puaedueg_pua-pharos-puanews-activity-7196397084466462720-KPzc/?originalSubdomain=ae

# 3rd Intra-Africa 2063 International Competition

Posted On: August 25, 2024

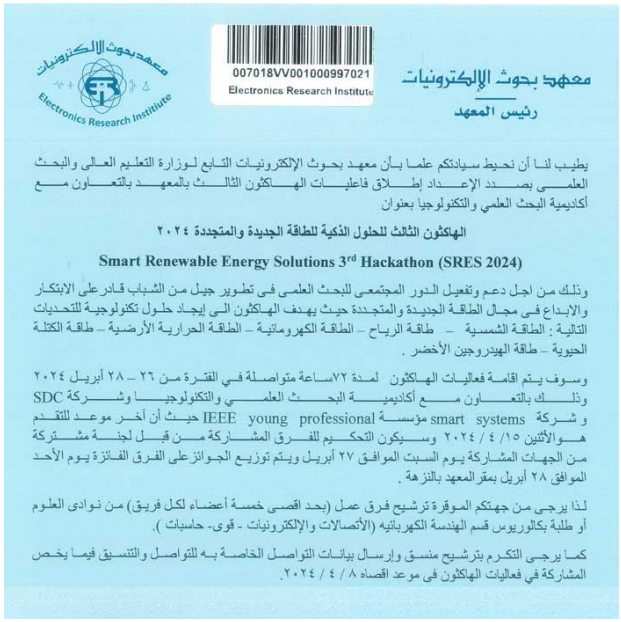
Over the course of four days, PUA's Entrepreneurship Club, in collaboration with the International Relations Department, organized the third edition of the Intra-Africa 2063 International Competition. This prestigious event featured over 20 speakers and trainers from various local and international sectors, and welcomed more than 40 contestants from 16 universities and educational institutions across several African countries.


The competition included intensive training workshops and discussion sessions, held alongside the main event, which addressed a range of critical topics. These workshops and sessions focused on key areas such as health, technology, climate change, tourism, and sustainable food, aligning with Egypt's Vision 2030 and the African Development Agenda 2063.
Eight teams competed in the event, representing institutions including Pharos University, Durban University of Technology in South Africa, University of Mpumalanga in South Africa, Senghor University in Alexandria, and Nasarawa State University in Nigeria. The contestants showcased their entrepreneurial project ideas across various tracks to a panel of experts and academics.
The competition concluded with the team from the University of Mpumalanga securing first place. The second place was awarded to the team from Pawailities, representing PUA's Faculty of Engineering, while the third place went to Titan Team from PUA's Faculty of Computer Science and Artificial Intelligence.

https://www.pua.edu.eg/3rd-intra-africa-2063-international-competition/

# 3rd Hackathon for Smart Solutions in New and Renewable Energy 2024

Posted On: April 17, 2024



معهد بحوث الإلكترونيات
رئيس المعهد

007018VV0010009970 21
Electronics Research Institute

يطيب لنا أن نحيط سيادتكم علما بأن معهد بحوث الإلكترونيات التابع لوزارة التعليم العالى والبحث العلمى بصدد الإعداد إطلاق فاعليات الهاكثون الثالث بالمعهد بالتعاون مع أكاديمية البحث العلمي والتكنولوجيا بعنوان

**الهاكثون الثالث للحلول الذكية للطاقة الجديدة والمتجددة ٢٠٢٤**

**Smart Renewable Energy Solutions 3rd Hackathon (SRES 2024)**

وذلك من اجل دعم وتفعيل الدور المجتمعى للبحث العلمى فى تطوير جيل من الشباب قادر على الابتكار والابداع فى مجال الطاقة الجديدة والمتجددة حيث يهدف الهاكثون الى إيجاد حلول تكنولوجية للتحديات التالية : الطاقة الشمسية – طاقة الرياح – الطاقة الكهرومائية – الطاقة الحرارية الأرضية – طاقة الكتلة الحيوية – طاقة الهيدروجين الأخضر .

وسوف يتم اقامة فعاليات الهاكثون لمدة ٧٢ساعة متواصلة في الفترة من ٢٦ – ٢٨ أبريل ٢٠٢٤ وذلك بالتعاون مع أكاديمية البحث العلمي والتكنولوجيا وشركة SDC و شركة smart systems مؤسسة IEEE young professional حيث أن آخر موعد للتقدم هو الأثنين ١٥/ ٤ / ٢٠٢٤ وسيكون التحكيم للفرق المشاركة من قبل لجنة مشتركة من الجهات المشاركة يوم السبت الموافق ٢٧ أبريل ويتم توزيع الجوائز على الفرق الفائزة يوم الأحد الموافق ٢٨ أبريل بمقر المعهد بالنزهة .

لذا يرجى من جهتكم الموقرة ترشيح فرق عمل (بحد اقصى خمسة أعضاء لكل فريق) من نوادى العلوم أو طلبة بكالوريوس قسم الهندسة الكهربائيه (الأتصالات والإلكترونيات - قوى- حاسبات ).

كما يرجى التكرم بترشيح منسق وإرسال بيانات التواصل الخاصة به للتواصل والتنسيق فيما يخص المشاركة في فعاليات الهاكثون فى موعد اقصاه ٨ / ٤ / ٢٠٢٤.

PUA's Field Training Center, in collaboration with the Electronics Research Institute (ERI) of the Ministry of Higher Education and Scientific Research, is pleased to announce the forthcoming launch of the third Hackathon. This event, conducted in partnership with the Academy of Scientific Research and Technology, will be titled "3rd Hackathon for Smart Solutions in New and Renewable Energy 2024."

The primary objective of this initiative is to bolster the Social impact of scientific research by nurturing a cohort of young innovators adept at generating creative solutions in the realm of new and renewable energy. By focusing on areas such as solar energy, wind energy, hydroelectric energy, geothermal energy, biomass energy, and green hydrogen energy, the hackathon seeks to address pressing challenges and foster technological advancements in these critical domains.

URL: https://www.pua.edu.eg/3rd-hackathon-for-smart-solutions-in-new-and-renewable-energy-2024/

## PUA's Engineering at the 3rd Hackathon

Posted On: May 4, 2024

The first team presented a project titled "LED Grow Light Fixture Prototype for Smart Greenhouse," while the second team showcased a collaborative project between the Electrical and Mechanical Engineering Departments titled "Design and Fabrication of Novel PUA Bladeless Wind Power." Participating students expressed their enthusiasm for the opportunity to advance to the final stage of the competition, highlighting the valuable learning experiences gained from interaction with 40 universities and research institutions.

Engaging with peers from diverse backgrounds expanded students' knowledge in electrical engineering and renewable energy fields, while fostering connections with industry professionals. Industrialists praised the innovative project ideas presented by the teams, affirming the relevance of such competitions in bridging academic knowledge with practical applications.


URL: https://www.pua.edu.eg/puas-engineering-at-the-3rd-hackathon/

## The design of wind turbines without blades, is the latest findings of Egyptian researchers, trying to explore the latest technologies that can be used for electricity generation.

The wind energy projects in Egypt are the forefront of the country's concerns, especially given the country's tremendous resources in this sector, as well as the easy localization of the turbine components.

In this context, Egyptian researchers are working on new designs for turbines, most recently the findings of the research team composed of the Mechanical Engineering and Electrical Engineering Departments of Pharos University, Alexandria.

The researchers succeeded in finding a design -- the Washington-based specialized energy platform -- for a turbine that generates wind power without blades.

The project won first place at the Petra University in Jordan, Jordan.

## Project: Solar panels in satellites


Mr. Mahmoud Mohammed Al-Maliji, Dean of the Faculty of Engineering, advisors to the Dean of the College, Mr. Dr. Alaa Shabl, Chief of Mechanical Engineering, Gentlemen, Department of Staff, Assistant Body, congratulating the team of the Mechanical Engineering Department of the Faculty of Engineering, Pharos University, for getting fourth place at Astro Material, and the first team in the history of the Satellite Track, to receive the Best Award of Innovation in one of the course of the eighth International Contest at the Military Technical College (Commander Ibrahim Slim Award), the first team, the UV experimental CubeSat, a research satellite to measure the ratio of UV in space, and the second team participated in the development of a new material used to anticipate to move the solar panels in small satellites used to anticipate the temperature on the planet.

It should be noted that the University of pharos teams of second and third years students are directly competing with a specialized research team from the Chinese University of HIT, projects graduating from the Military Technical College, Alazhar University, Beni Suev University, Suez Canal University, Ain Shams University and Zagazig University. The competition events concluded on Thursday, 1/8/2024. The awards ceremony was honored by the Commander-in-Chief of the Egyptian Armed Forces, the Minister of Defence and War Produce, and a large number of leaders of the armed forces, heads of universities and scientific and research bodies.

URL: https://www.linkedin.com/posts/faculty-of-engineering-pharos-university-in-alexandria-p-u-a_%D9%8A%D8%AA%D9%82%D8%AF%D9%85-%D8%A7%D9%84%D8%B3%D9%8A%D8%AF-%D8%A7%D9%84%D8%A7%D8%B3%D8%AA%D8%A7%D8%B0-%D8%A7%D9%84%D8%AF%D9%83%D8%AA%D9%88%D8%B1-%D9%85%D8%AD%D9%85%D9%88%D8%AF-%D9%85%D8%AD%D9%85%D8%AF-%D8%A7%D9%84%D9%85%D9%84%D9%8A%D8%AC%D9%8A-activity-7225209442085027840-_uEN/?originalSubdomain=ae

## Sustainable projects at IATF 2023

Posted On: November 23, 2023

Dr. Nurhan Al-Heridi, Coordinator of African Relations at the University and a teacher at the Architecture Department of the Faculty of Engineering at the Forum and Conferences of the Intra-African Expo Convention (IATF 2023), held in Cairo from 9 to 15 November 2023 under the auspices of the President of the Republic, where the Forum provided a unique and valuable platform for expanding African communication with African bodies and universities. The forum focus on implementation of sustainable development goals through entrepreneurship enforcement in Africa.



URL: https://www.instagram.com/pua.edu.eg/p/CrgqO_SIuSU/?img_index=1

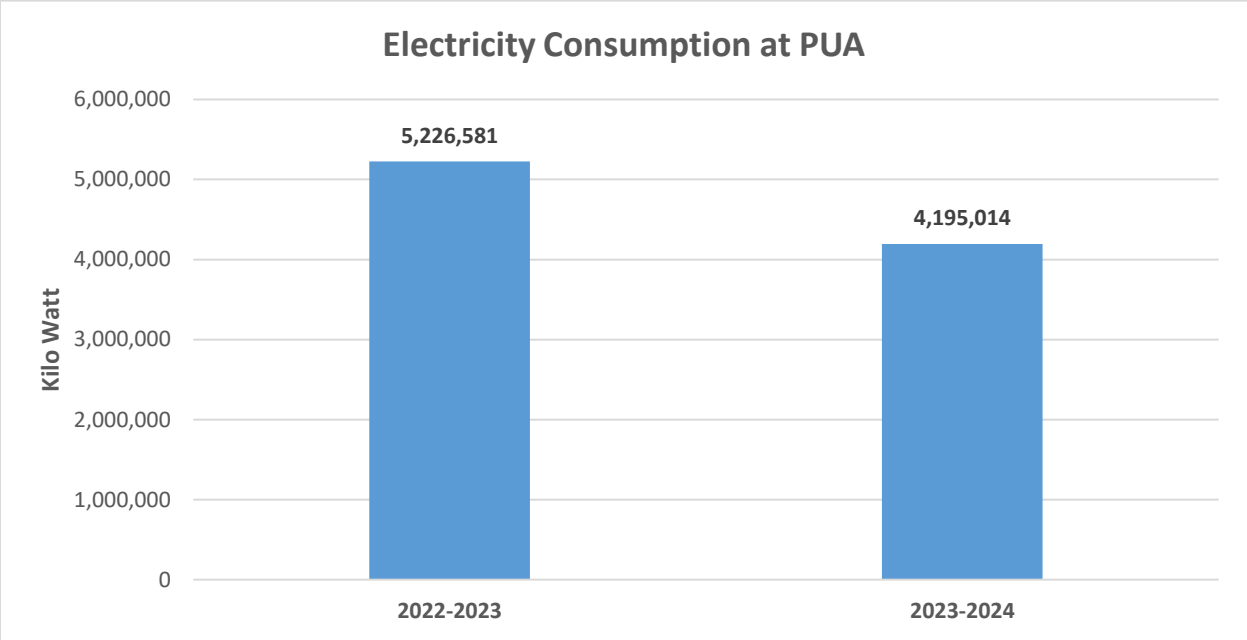
URL: https://www.pua.edu.eg/puas-participates-in-iatf-2023/

# PUA Energy Reviews to identify areas where energy wastage is highest

Pharos University in Alexandria monitors energy consumption monthly to identify areas with high wastage. This resulted in constructing Plans to upgrade existing buildings to higher energy efficiency by utilizing energy-efficient appliances for example, insulation, LED lighting and the deployment of sustainable technology.

The following table and graph illustrate the electricity consumption in the academic year 2022-2023 and 2023-2024:

| No. | Academic Year | Energy (Electricity) KWH | Energy (Electricity) GJ |
|---|---|---|---|
| 1 | 2022 - 2023 | 5,954,767.00 | 21,437.16 |
| 2 | 2022 – 2023 (Revised) | 5,226,581.00 | 18,815.69 |
| 3 | 2023 - 2024 | 4,195,014.00 | 15,102.05 |



## Actions and approaches towards energy conservation

### Pharos University Plan to conserve energy

All buildings at Pharos University in Alexandria implement the elements of green building in construction. This is done by:

- Allowing natural daylight and ventilation in all classrooms, offices and laboratories,
- Green plants are available in all corridors,
- Instructions are available on stickers to always switch off the lights when not in the room to enhance energy saving.

**Natural Daylight – Natural Ventilation (Pharos University in Alexandria, Egypt )**



**Instructions are available on stickers to always switch off the lights (Pharos University in Alexandria, Egypt)**

## Spreading awareness on energy conservation throughout the university

## Energy Efficient Appliances Usage:

Using LED lighting as an energy efficient light source

Pharos University in Alexandria intends to realize further energy savings by paying close attention to energy management. All parts of the organization can assess their own energy consumption and realize their own energy-saving potential by means of, for example, insulation, LED lighting and the deployment of sustainable technology.

| Appliance | Total Number | Total number energy Efficient appliances | Percentage |
|---|---|---|---|
| LED Lamp | 250,000 | 250,000 | 100% |
| Fan | 150 | 50 | 33% |
| Etc. | … | … | … |
| | | Average Percentage | 66.5% |

# Elements of Green Building Implementation as Reflected in All Construction and Renovation Policies

Glass transparent windows for Natural Daylight – Natural Ventilation (Pharos University in Alexandria, Egypt )

## Greenhouse gas emission reduction program

Pharos University in Alexandria campus sites are cyclist and pedestrian friendly. Many have vehicle-free paths for these users. There is a 30 kmph speed limit on all internal roads, and cycle paths on the public roads.

At PUA zero emission vehicles include electric cars which constitute 7% of cars in the campus. In addition to 8% of cars using natural gas as fuel.

At PUA parking for bicycles are available.

Ride share designed to encourage commuters to adopt healthy and sustainable transportation options. (Carpool)

Electric Car Charging (Pharos University in Alexandria, Egypt)

Charging point for Electric Cars (Pharos University in Alexandria, Egypt)

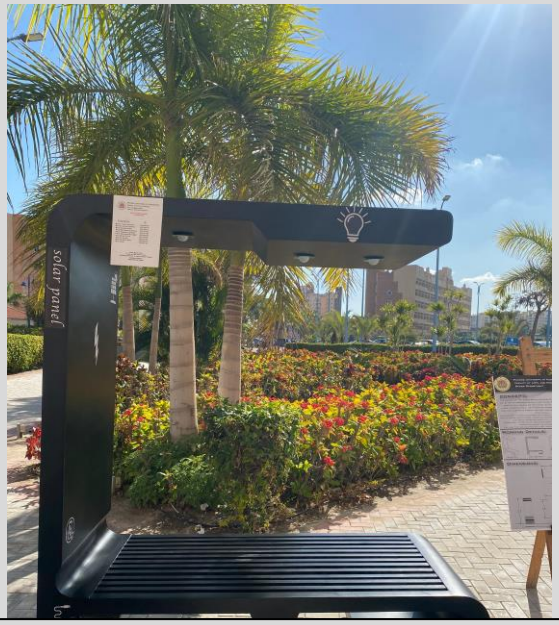
Ride Share (Carpool) (Pharos University in Alexandria, Egypt)

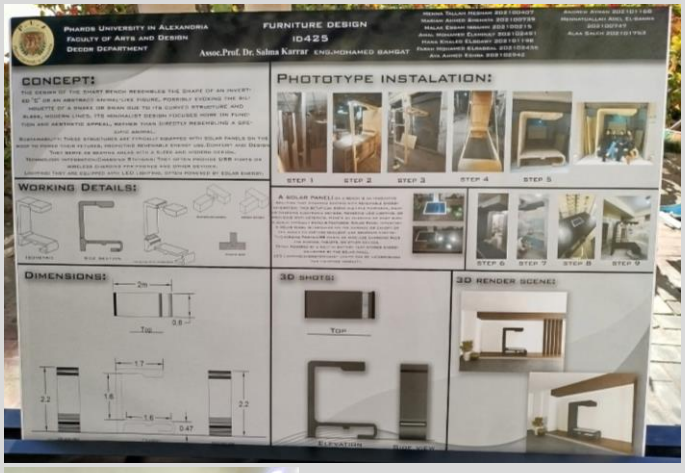
Bicycles Parking (Pharos University in Alexandria, Egypt)

# PUA Participated in Opening SRTA Solar Power Plant

URL: https://www.pua.edu.eg/media-gallery/photo-albums/pua-participated-in-opening-srta-solar-power-plant/

**A solar-powered seating unit** was designed and implemented as part of the *Furniture Design* course for third-year students at the Department of Interior Design, Faculty of Arts and Design.
The unit aims to promote energy efficiency and provides facilities for device charging and lighting through the use of solar panels, demonstrating the integration of creative design with sustainable energy solutions.




## Programs and courses that involve modern and renewable energy

### A Professional Training Program in the Field of Lighting
### "Lighting Design in Projects"

The First –of- its- Kind Program in Egypt and Arab World

The Professional training program in lighting graduates distinguished people in the field of lighting, equipped with scientific and professional information that enables them to conduct studies and designs for lighting projects depending on the specifications of international standards applied in the most advanced European and American countries following the sustainable developments and the sustainable development goals

Those who are qualified to join the training program:

1. The graduates of the faculty of Engineering for the Architectural Engineering and the Electrical Engineering Departments.
2. The graduates of the faculty of Fine Arts for the Interior Design and the Expressive Arts Programs.
3. The graduates of the faculty of Mass Communication.
4. The graduates of the faculty of Agriculture for the Landscaping Department.
5. Equivalent higher institutes and their final year's students.

The program qualifies the students to obtain the necessary information in the following areas:

1. The nature of light and its physical properties, light quantities and methods of its measurement.
2. Human correlation with light and colors, and the interaction of the eye to this.
3. Basic concepts and rules in the interior and exterior lighting.
4. Electrical lamps and lighting units.
5. Foundations and principles of decoration and interior design in residential and commercial buildings, hotels and other buildings.

The Professional training program grants students the ability to do the following:

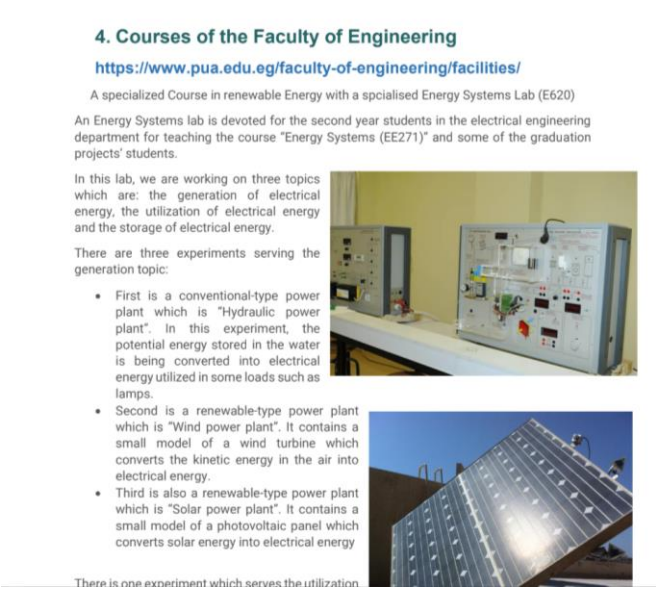
1. Interior lighting designs of different places (offices, educational buildings, hotels, public places, halls and theaters, hospitals and places of health care, shopping centers, residential buildings and factories – according to the Egyptian Code for Lighting Design and Implementation.
2. Exterior Lighting designs (streets, roads and squares, building facades, stadiums, bridges and tunnels, and landscaping)- according to the Egyptian Code for Roads and Tunnels Lighting Design and Implementation.

The Program features:

1. The student will be granted a degree certificate accredited by Pharos University.
2. The program follows both theoretical and applied approaches.
3. A group of lighting- specialized professors are teaching the program.

Study System:

The lighting training program is scheduled afternoon at two days a week, for a period of 5 weeks.



**4. Courses of the Faculty of Engineering**

**https://www.pua.edu.eg/faculty-of-engineering/facilities/**

A specialized Course in renewable Energy with a spcialised Energy Systems Lab (E620)

An Energy Systems lab is devoted for the second year students in the electrical engineering department for teaching the course "Energy Systems (EE271)" and some of the graduation projects' students.

In this lab, we are working on three topics which are: the generation of electrical energy, the utilization of electrical energy and the storage of electrical energy.

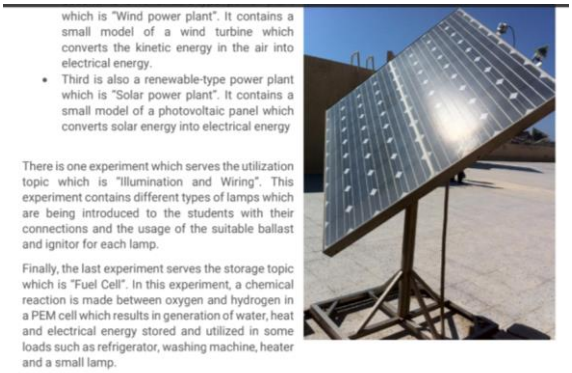
There are three experiments serving the generation topic:

- First is a conventional-type power plant which is "Hydraulic power plant". In this experiment, the potential energy stored in the water is being converted into electrical energy utilized in some loads such as lamps.
- Second is a renewable-type power plant which is "Wind power plant". It contains a small model of a wind turbine which converts the kinetic energy in the air into electrical energy.
- Third is also a renewable-type power plant which is "Solar power plant". It contains a small model of a photovoltaic panel which converts solar energy into electrical energy

There is one experiment which serves the utilization







which is "Wind power plant". It contains a small model of a wind turbine which converts the kinetic energy in the air into electrical energy.

- Third is also a renewable-type power plant which is "Solar power plant". It contains a small model of a photovoltaic panel which converts solar energy into electrical energy

There is one experiment which serves the utilization topic which is "Illumination and Wiring". This experiment contains different types of lamps which are being introduced to the students with their connections and the usage of the suitable ballast and ignitor for each lamp.

Finally, the last experiment serves the storage topic which is "Fuel Cell". In this experiment, a chemical reaction is made between oxygen and hydrogen in a PEM cell which results in generation of water, heat and electrical energy stored and utilized in some loads such as refrigerator, washing machine, heater and a small lamp.



URL: https://www.pua.edu.eg/faculty-of-engineering/professional-programs/

# Courses that Support Affordable and Clean Energy

| No | Faculty in Pharos University | Course name | Course code | SDG of relevance |
|---|---|---|---|---|
| 1 | Engineering | Energy conservation | EP 330 | SDG 7 |
| 2 | Engineering | Renewable energy and storage systems | EM 333 | SDG 7 |
| 3 | Mass Communication | Communication and Development | COM 103 | SDG 1 - SDG 2 - SDG 7 - SDG 9 - SDG 11 |
| 4 | Mass Communication | The Arts History | GEN 302 | SDG 7 |
| 5 | Tourism and Hotel Management | Tourism and Globalization | TM 472 | SDG 1 - SDG 7 - SDG 8 - SDG 10 - SDG 11 - SDG 13 - SDG 16 - SDG 17 |
| 6 | Tourism and Hotel Management | Tourism Impact and Sustainability | TM 354 | SDG 1 - SDG 6 - SDG 7 - SDG 8 - SDG 11 - SDG 13 - SDG 14 - SDG 15 |
| 7 | Tourism and Hotel Management | Resort and Condominium Management | HM 411 | SDG 7 - SDG 9 |
| 8 | Tourism and Hotel Management | Hospitality Facilities Planning&Design | HM 451 | SDG 6 - SDG 7 - SDG 9 - SDG 11 |
| 9 | Tourism and Hotel Management | Hospitality Project 2 | HM 482 | SDG 7 - SDG 9 |
| 10 | Arts and Design | Typography (1) | GD 471 | SDG 6 - SDG 7 - SDG9 - SDG 14 - SDG 15 |
| 11 | Arts and Design | Typography (2) | GD 472 | SDG 6 - SDG 7 - SDG9 - SDG 14 - SDG 15 |

| No | Faculty in Pharos University | Course name | Course code | SDG of relevance |
|---|---|---|---|---|
| 12 | Arts and Design | Typography (3) | GD 571 | SDG 6 - SDG 7 - SDG9 - SDG 14 - SDG 15 |
| 13 | Arts and Design | Graduation Project Research | ID 581 | SDG 7 - SDG 9 - SDG 11 - SDG 13 |
| 14 | Arts and Design | Graduation Project | ID 582 | SDG 7 - SDG 9 - SDG 11 - SDG 13 |
| 15 | Arts and Design | Digital photography | TD 411 | SDG 7 - SDG 9 |
| 16 | Arts and Design | Television Scenery Design | TD 421 | SDG 7 - SDG 9 |
| 17 | Arts and Design | Theatrical Scenery Design | TD 423 - TD 424 | SDG 7 - SDG 9 - SDG 12 |
| 18 | Arts and Design | Audio and Visual | TD 461 - TD 462 | SDG 7 - SDG 9 |
| 19 | Arts and Design | Digital Character Design | TD 521 | SDG 7 - SDG 9 |
| 20 | Arts and Design | Sociology & Psychology of Design | TD 533 | SDG 7 - SDG 9 |
| 21 | Arts and Design | History of Cinema | TD 541 | SDG 7 - SDG 9 |
| 22 | Arts and Design | Technology of Contemporary Theater | TD 562 | SDG 7 - SDG 9 |
| 23 | Arts and Design | Graduation Project Research | TD 581 | SDG 7 - SDG 9 - SDG 11 - SDG 12 |
| 24 | Arts and Design | Graduation Project | TD 582 | SDG 7 - SDG 9 - SDG 11 - SDG 12 |
| 25 | Arts and Design | Interior Architecture Theories | ID 431 | SDG 7 - SDG 9 - SDG 11 |
| 26 | Arts and Design | Architectural Render | ID 551 | SDG 7 - SDG 9 - SDG 11 |
| 27 | Engineering | Technical Report Writing andPresentation | HU 113 | SDGs 12 SDG7 |

| No | Faculty in Pharos University | Course name | Course code | SDG of relevance |
|---|---|---|---|---|
| 28 | Engineering | Environmental Studies in Architecture | EA 001 | SDG 7 and SDG13 |
| 29 | Engineering | Data and Computer Communications | EC 361 | SGD7, SGD8,SGD9 |
| 30 | Engineering | Computer Networks | EC 363 | SGD7, SGD8,SGD9 |
| 31 | Engineering | Computational Models | EC 372 | SGD7, SGD8,SGD9 |
| 32 | Engineering | Digital Control System | EE 391 | SDG7, SDG9 & SDG11 |
| 33 | Engineering | Graduation Project (1) | ES 400-1 | SDG 6, SDG 7, SDG 8, SDG 9, SDG 11, SDG 14 |
| 34 | Engineering | Graduation Project (2) - Water and Waste Water Engineering | ES 400-2 | SDG 6, SDG 7, SDG 8, SDG 9, SDG 11, SDG 12, SDG 14 |
| 35 | Engineering | Digital Logic Fundamentals | EE 202 | SDG7, SDG11 & SDG12 |
| 36 | Engineering | Introduction to Electronic Circuits | EE 213 | SDG3, SDG7, SDG9, SDG11, SDG12 & SDG13 |
| 37 | Engineering | Micro-Electronic Devices and Circuits | EE 224 | SDG3, SDG7, SDG9, SDG11, SDG12 |
| 38 | Engineering | Solid State Electronics | EE 225 | SDG7 |
| 39 | Engineering | Energy Systems | EE 271 | SDG 3, SDG 7, SDG 11, SDG 12 & SDG 13 |

| No | Faculty in Pharos University | Course name | Course code | SDG of relevance |
|---|---|---|---|---|
| 40 | Engineering | Digital Integrated Circuits | EE 338 | SDG3, SDG7, SDG9, SDG11, SDG12 |
| 41 | Engineering | Digital Image Processing | EE 345 | SDG7 & SDG12 |
| 42 | Tourism and Hotels Management | Room Division Management | HM 311 | SDG 7 |
| 43 | Engineering | Engineering Perspectives and Technology | HU 121!! | SDG 3 - SDG 4 - SDG 7 - SDG 8 - SDG 9 - SDG 12 - SDG 17 |
| 44 | Engineering | Engineering Environment and Society | HU 161!! | SDG 3 - SDG 5 - SDG 6 - SDG 7 - SDG 8 - SDG 9 - SDG 11 - SDG 12 - SDG 13 - SDG 14 - SDG 15 - SDG 17 |

| No | Faculty in Pharos University | Course name | Course code | SDG of relevance |
|---|---|---|---|---|
| 45 | Engineering | Eng.Drawing 2 & Descriptive Geometry | EB142 | SDG 4 - SDG 7 - SDG 9 |
| 46 | Financial and Administrative Sciences | Islamic Finance | BF858 | SDG 1 - SDG 2 - SDG 3 - SDG 4 - SDG 5 - SDG 6 - SDG 7 - SDG 8 - SDG 9 - SDG 10 - SDG 11 - SDG 12 - SDG 13 - SDG 14 - SDG 15 - SDG 16 - SDG 17 |
| 47 | Arts and Design | Graduation Project | ID582 | SDG 7 - SDG 11 - SDG 13 |
| 48 | Arts and Design | Motion Graphics 1 | MA323 | SDG 7 |

Publications that Address Affordable and Clean Energy (27 publications)

https://www.pua.edu.eg/wp-content/uploads/2025/11/PublicationsSDG7.pdf