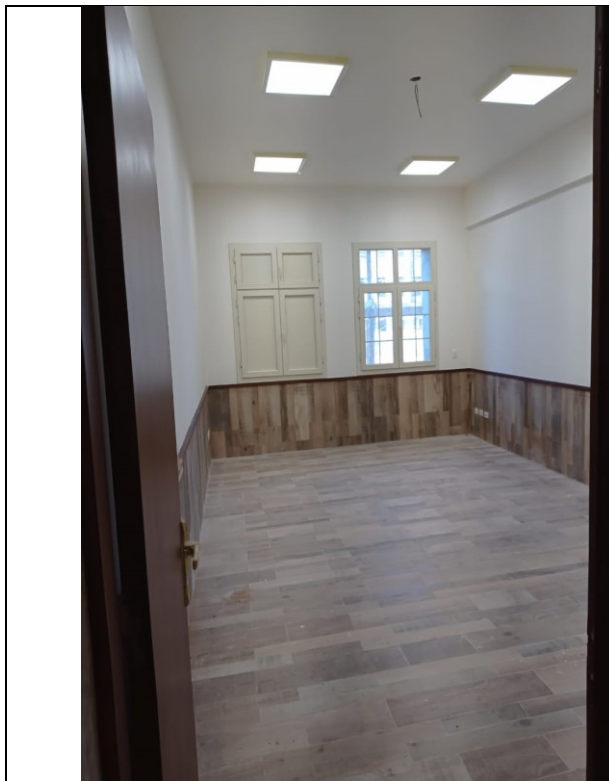


Template for Evidence(s) UI GreenMetric Questionnaire

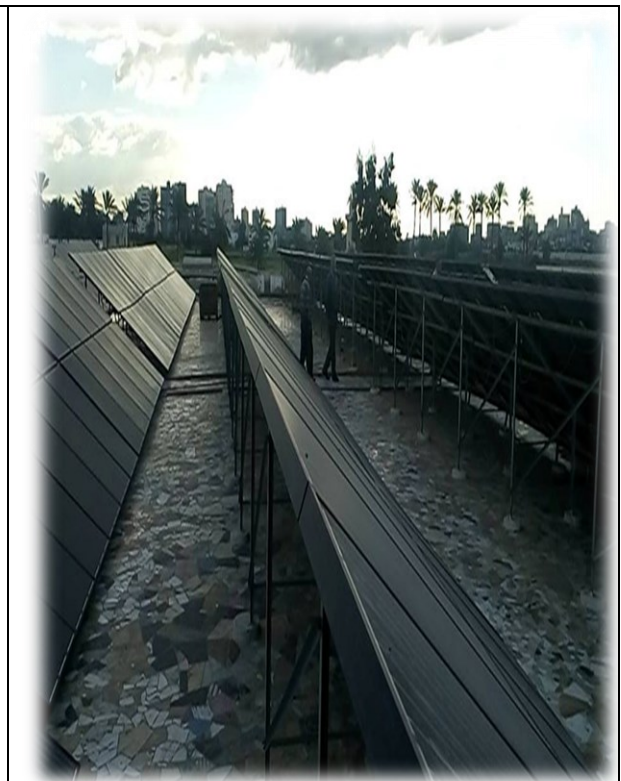
University : Alexandria University
Country : Egypt
Web Address : <https://alexu.edu.eg/>

[2] Energy and Climate Change (EC)

[2.10] Greenhouse gas emission reduction program



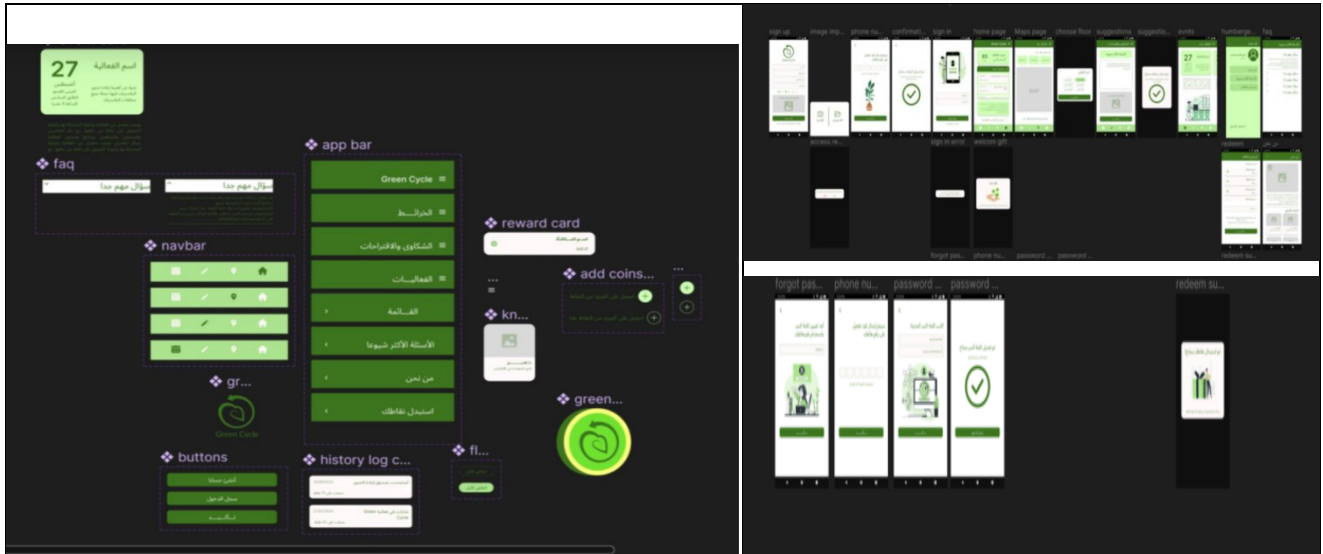
1. LED lighting and lamps (Abis Campus, Alexandria University)



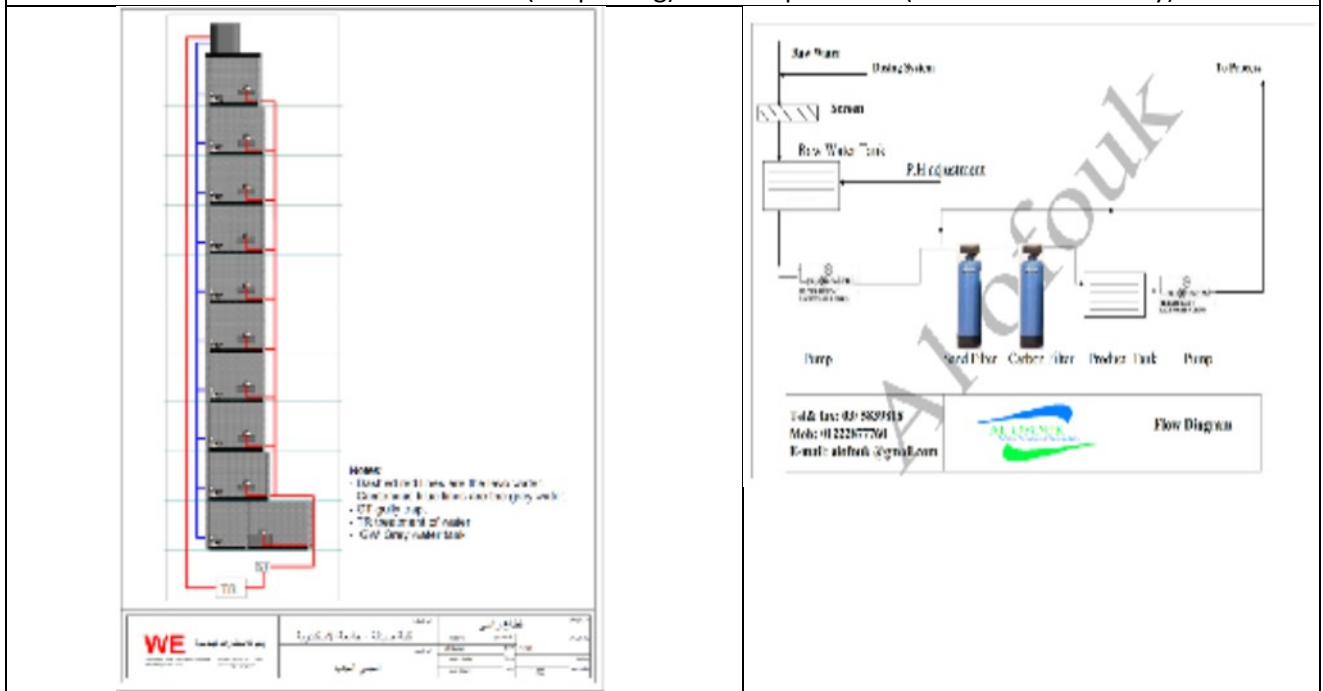
2. Renewable energy (Solar Energy Center at the Faculty of Agriculture, Alexandria University)



3. Ride Share using the University Shuttle (Alexandria University)



4- An application, prepared for smart phones, specific to Green Cycle project enables college members to share cars (car pooling) for transportation (Alexandria University)



5- Grey water recycling system organized by Faculty of Pharmacy (Alexandria University)



6- Waste recycling by Green Cycle project- Faculty of Pharmacy (Alexandria Univrsity)



7- Separating waste into special containers for plastic, paper, glass and metal waste. Donation provided by the Rotary Club of Newaira (for condolences and to the College of Medicine and the Hospital).



8. Solar Energy Center at the Faculty of Science (Alexandria University)



9. BIPV Roof Pergola, Faculty of Science in Moharram Bek (Alexandria University)



10. BIPV Garden Pergola, Faculty of Science in Moharram Bek (Alexandria University)




ACS Undergrad

Yesterday at 12:59 AM · 🌐

The Student Communities awards for the 2023-2024 academic year have been announced! Congratulate all of the Outstanding, Commendable, Honorable Mention, and Green Chemistry winners!

[ACS Green Chemistry Institute \(ACS GCI\)](#)

Who received awards for the 2023-2024 academic year?



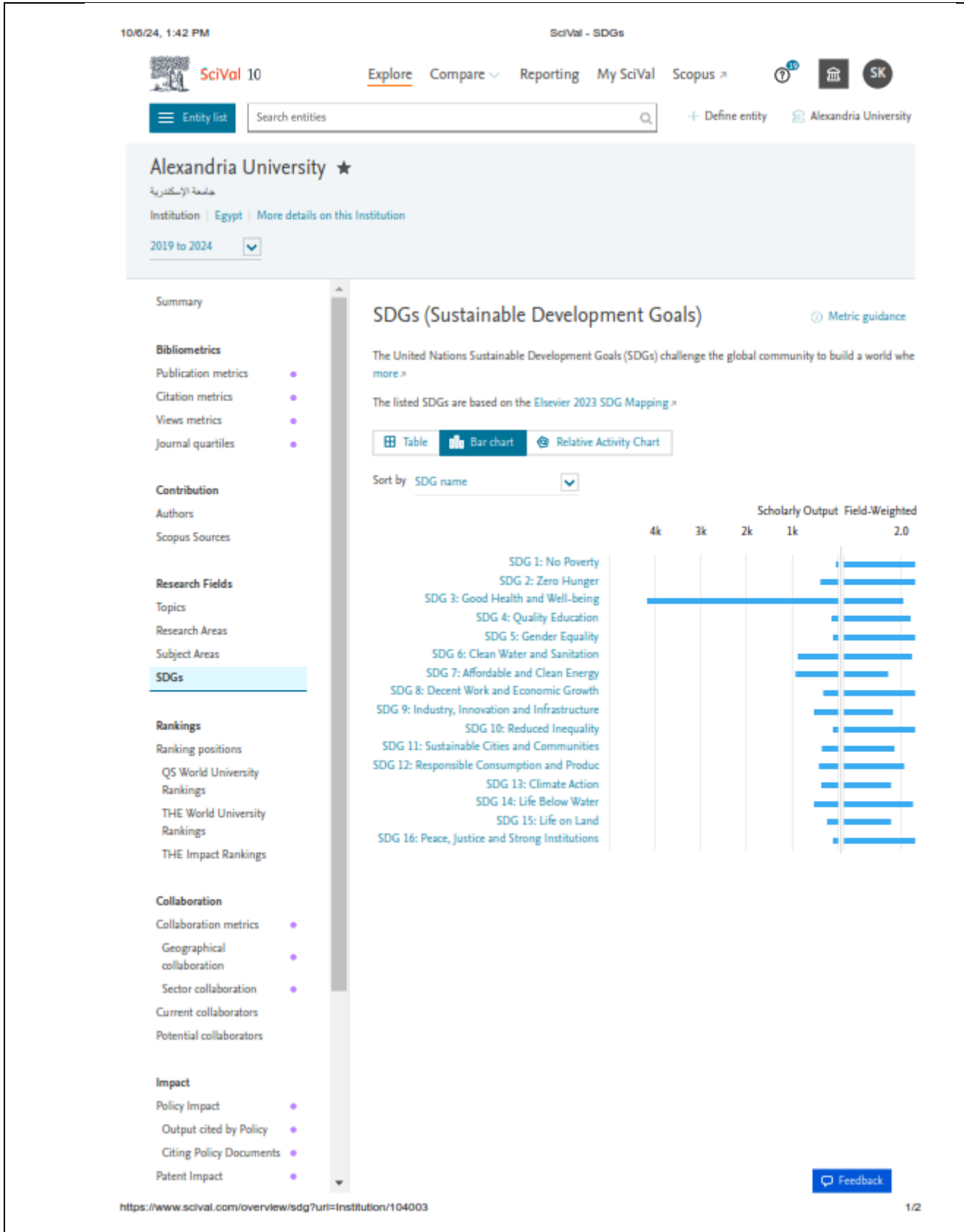
Swipe to find out >>>

Outstanding Winners

- Alexandria University
- American University of Sharjah
- Augusta University
- Belhaven University
- California State University- Stanislaus
- Chandigarh University
- City University of New York
- Herbert H. Lehman College
- Colorado State University
- Eastern Oregon University
- El Paso Community College
- Federal University of Ceará
- Federal University of Minas Gerais
- Florida International University- Biscayne Bay Campus
- Francis Marion University
- Georgia College & State University
- Georgia Gwinnett College
- Heidelberg University
- Idaho State University
- Institute of Space Technology
- Inter American University of Puerto Rico- Ponce Campus
- Linfield University
- Mehran University of Engineering & Technology
- Midland College
- Midwestern State University
- Mississippi College
- Monash University Malaysia
- Nazarbayev University
- North Central College
- Northeastern University
- Nova Southeastern University
- Ouachita Baptist University
- Qatar University
- Quaid E Awam University
- Queens University - Kingston
- Saint Francis University
- Salt Lake Community College
- Shahjalal University of Science and Technology
- Sokoto State University
- South Dakota School of Mines and Technology
- Southeastern Oklahoma State University
- Southwest Minnesota State University
- St. Mary's College of Maryland
- Swansea University
- Tarrant County College - Northeast

11. Alexandria University Student Chapter at the Faculty of Science achieved two awards: **The Outstanding ACS Student Community Award for the 2023-2024 academic year. The Green Chemistry Award.**

<https://www.facebook.com/share/p/unDZty49pxQLYZ8U/>



12. The scholarly output and Field weighted citation of Alexandria University publications in the different

● ● ● ● ●

<p>1</p> <p>Exchange visits of lecturers and researchers</p>	<p>2</p> <p>Student Mobility</p>	<p>3</p> <p>Joint study programs</p>	<p>4</p> <p>Joint research programs</p>	<p>5</p> <p>Collaborative symposia, and conferences</p>
<p>6</p> <p>Pedagogical Experiments</p>	<p>7</p> <p>Joint Projects</p>	<p>8</p> <p>Knowledge Transfer</p>	<p>9</p> <p>Community Service</p>	<p>10</p> <p>Sustainable Development</p>

Dual Degrees : 49 with 5 countries

- (U.K. / U.S.A./ France/ Italy/ Spain)

Joint Degrees: 3 with 2 countries

- (U.K. / France)

Potential Programs: 87 with 8 countries

(U.K. / U.S.A./ France/ Italy/ Germany/ Canada/ Austria/ Malaysia)

13. Examples of ongoing International Collaboration and Partnerships by collaborating with other countries and institutions to share knowledge, technology, and expertise on GHG emission reduction.

Description:

Table: Greenhouse gas emission sources at Alexandria University Campus

	Emission data	Definition
Scope 1	Stationary combustion	Stationary combustion refers to the burning of fuels to produce electricity, steam, and heat in a fixed location, such as boilers, burners, heaters, kilns, and engines.
	Mobile combustion	Burning of fuels by institution-owned transportation devices
	Process emissions	Direct greenhouse gas (GHG) emissions from physical or chemical processes rather than from fuel combustion
	Fugitive emissions	Hydrofluorocarbon releases during the use of refrigeration and air conditioning equipment and methane leakage from natural gas transport
Scope 2	Purchased electricity	Indirect GHG emissions result from the generation of the electricity purchased and used by the institution

	Energy Efficiency	Buildings and Infrastructure:
	Renewable Energy Deployment	Solar and Wind Power: increasing the share of renewable energy in the energy mix.
Scope 3	Waste	Indirect GHG emissions resulting from the incineration or landfill of your institution's solid waste
	Purchased water	Indirect GHG emissions resulting from the generation of water supply purchased and used by the institution
	Commuting	Indirect GHG emissions resulting from regular commuting from and to institutions by students and employees (i.e., reducing regular commuting by using shared vehicles, carpooling)
	Air travel	Indirect GHG emissions resulting from air travels paid by institutions (i.e., reducing the number of staff air travel opportunities)
Scope 4	Innovation and Technology Development	Investment in Green Technologies: Support research and development in innovative technologies like hydrogen fuel cells, battery storage, and artificial photosynthesis to capture and utilize carbon.
Scope 5	Digitalization	Promote digital solutions
Scope 6	Public Awareness and Behavioral Change	Educational Campaigns: Raise awareness about the importance of reducing GHG emissions and the role individuals can play in everyday actions, such as reducing energy use, recycling, and adopting sustainable transport.
Scope 7	International Collaboration and Partnerships	Collaborate with other countries and institutions to share knowledge, technology, and expertise on GHG emission reduction.

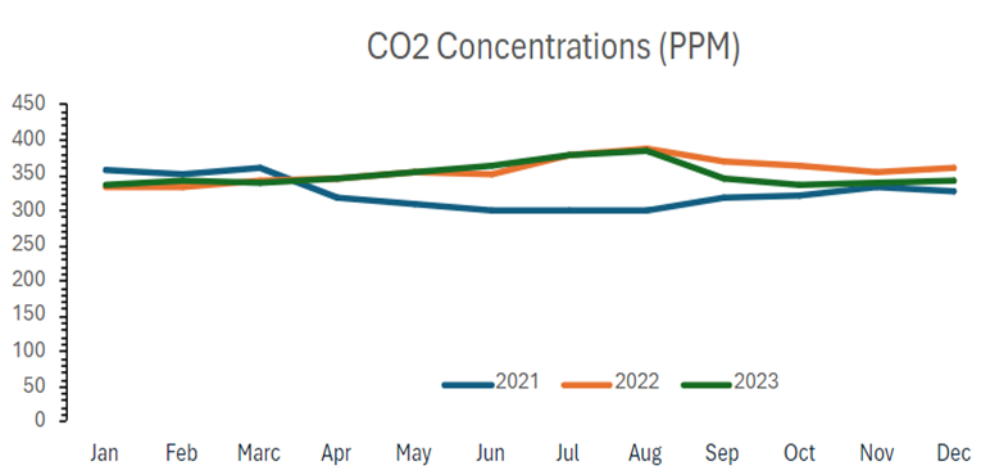
Elements of Green Building Implementation as Reflected in all new construction and renovation policies:

Scope 1, Stationary combustion and Mobile combustion: These GHG sources are reduced by Ride Share using the University Shuttle and Carpool, by the decrease of burning of fuels. Regular vehicle maintenance to reduce greenhouse gas emissions. In addition, the use of bicycles reduces the GHG source. Reducing the individual carbon footprint of students, faculty members and college employees by developing an application, prepared for smart phones. The Green Cycle project was organized by Faculty of Pharmacy- Alexandria University that enables faculty members to share cars for transportation in a safe manner in order to reduce carbon emissions resulting from car exhausts. Is project is a succesful project which was performed as a prototype at the Faculty of Pharmacy. Alexandria University's plan is to establish the Green Cycle project in all Faculties.

Scope 1, Fugitive emissions: All new buildings in Abis campus are designed with large windows to get maximum benefit from daylight and natural ventilation. In addition, all University buildings have good natural ventilation and daylight. This will reduce the use air conditioning equipment and accordingly decrease GHG.

- **Alexandria University** has the lead and leadership in establishing the environmental sector and community service, and it has an effective role in preserving the environment in Alexandria and the neighboring governorates. The university, with its various colleges and institutes, is committed to implementing Law No. 4 of 1994 and its regulations. The university has environmental records for most colleges and institutes, and it also conducts environmental impact assessment studies for all its projects by consultants accredited by the Ministry of Environment.

- The university is also environmentally friendly and disposes of waste in a safe manner, as it has contracts with transportation companies for hazardous, medical, non-hazardous, solid and liquid waste.
- The university also monitors greenhouse gases and suspended and inhaled solid particles. It is committed to preserving the environment from emissions that may lead to environmental pollution and then climate change. The monitoring is carried out by faculty members who hold consultant certificates for self-monitoring of facilities, as well as environmental measurements in laboratories accredited by the Environmental Affairs Agency.
- Carbon dioxide has been monitored in Faculty of Science building over the past three years for 24 hours a day and the monthly averages were presented in the following graph:



This figure shows the monthly average CO₂ concentration over three years (2021-2023). It is noted that CO₂ concentration decreased in the period from March to September 2021, as a result of the closure during the Corona pandemic.

It is worth noting that carbon dioxide emissions during 2022 and 2023 were within the threshold limits permitted by Law 4 of 1994 due to the university's efforts to prevent burning and the use of natural gas and solar energy.

Scope 2, Purchased electricity: In light of the keenness to rationalize energy consumption in university buildings and the general trend to increase the percentage of reliance on new and renewable sources in electricity production, and in cooperation with the European Union, the European Union funding was accepted for a project to transform some buildings of Alexandria University into green buildings by reducing energy consumption in addition to constructing Electrical power stations powered by solar energy on the roofs of some qualified faculty and institute buildings suitable for this purpose.

- Accordingly, three buildings belonging to the university's faculties were chosen as a first stage to study the feasibility of applying the project to them in terms of the building's ability to bear the weight of solar stations to produce electricity, as well as studying the spaces available for building these stations and the extent of those spaces' exposure to solar radiation throughout the day. The opportunities available to reduce reliance on usual energy sources were also studied in terms of using more efficient lighting, increasing reliance on natural lighting during the day, and reducing the building's air conditioning loads.
- After research and review, the specialized scientific programs will be developed in the Faculty of Engineering, the Faculty of Education building within the Literary faculties Complex, and the Manchester Building in the Faculty of Medicine, which were chosen due to the recent construction of these buildings and their ability to accommodate the proposed development in terms of the electrical load network and the development of air conditioning systems and water heating systems used in laboratories and bathrooms.
- These buildings were visited and their suitability for the project was evaluated. The current electricity consumption and the possibility of covering these loads with electricity generated from



solar energy were studied. The roof areas facing south and suitable for establishing solar stations were inspected and raised. The available roof area in the Specialized Scientific Programs Building at the **Faculty of Engineering**, Alexandria University, was 2,400 square meters. It can be used to create a solar station with an area of 1,000 square meters with a capacity of **120 kilowatts**, so that the station will be able to generate **360 megawatt hours** of electricity annually. As for the **Faculty of Education** building, the total area of the building was 4,000 square meters, and the appropriate spaces for building the station accommodate 1,000 square meters of solar cells with a capacity of **120 kilowatts**, so that the station is capable of generating **360 megawatt hours** of electricity annually, and for the Manchester building at the **Faculty of Medicine**, 1,200 square meters is capable of accommodating a solar power station with an area of 800 square meters. With a capacity of **96 kilowatts**, the station is capable of generating **288 megawatt hours** of electricity annually. These stations also contribute to reducing carbon dioxide emissions by a total of approximately 214 tons annually. The total expected cost of the project is about 300,000 euros.

As for energy, all the new buildings in Abis Campus have solar energy generation cells to provide part of the building's needs, which are estimated at about 45%, in addition to using energy-saving lamps (LED). In addition, the public site lighting poles are powered by solar energy.

All the faculties and institutes of the university realize their own energy-saving potential by means of LED lighting and the deployment of sustainable technology. Alexandria University have generalized this initiative in some of the faculties of Alexandria University in gradual stages.

Alexandria University Program to reduce Electricity consumption from Air Conditioners and electric devices such as Computers, printers, lab apparatus.

1. All newly purchased AC are inverter AC to reduce the electricity consumption.
2. The new electric devices such as Computers, printers, lab apparatus are energy efficient devices.
3. All electronic devices must be shut down at night, when not used.
4. Regular Maintenance of all devices.
5. The thermostats of the air conditioner are set at 25°C, and direct sunlight is avoided by using sun protection curtains

Scope 3, Waste: Implementing environmental awareness programs at the beginning of study on policies that can be followed to reduce waste production on campus, and to reduce the consumption of paper, plastic, and metals on college campuses.

Alexandria university program to reduce the use of paper and plastic in campus.

- 1) Development of electronic archiving system; the university faculties and the main campus are moving toward the electronic archiving system to reduce paper consumption.
- 2) University decree to reduce the use of paper in the campus:
 - 2.1: The president decree to use the e-mails for communications inside the campus and between the university main campus and all the other campuses.
 - 2.2: In the situations, the university or any of its faculties need to print the official documents; this has to be on recycled paper (2 faces copy).
 - 2.3: The University formulated a community for administrative reform to minimize the administrative processes and decrease the use of papers except in who are relevant to financial process.
- 3) Digital transformation toward electronic exams to reduce paper consumption.
- 4) Digital transformation toward electronic course to reduce paper consumption and books printing.
- 5) Electronic administration of student courses by about 50% instead of written administration to reduce paper consumption.

Scope 3, purchased water: The University has applied a strategy in the faculties to decrease water consumption through installation of special parts on water taps, showers, toilette, and bathroom bidet which can conserve about 50% of water consumption. Water saving devices are used instead of traditional devices. For example,



the use of a hand-washing faucet with automatic control via a sensor, and high-efficiency bathroom devices. Supplying water taps with water conservation units. Adopting a mechanism to maintain water pipes to prevent waste resulting from leaks.

In addition, a policy for the reduction of purchased water was implemented in Abis Campus 1) Water-saving plots are used, which will reduce water consumption by about 30%. The sewage water will be treated and reused in the irrigation of green areas in the project. 2) Rainwater is collected in the main lake and used for irrigation. 3) The use of plants with few water rationed plants to reduce irrigation needs in addition to absorbing quantities of rainwater to reduce the severity of rain spells.

Also, faculty of Pharmacy is seriously seeking to implement a grey water (wastewater) recycling system that depends on reusing wastewater from sewage basins only (without using wastewater from laboratory basins) by re-pumping it into the flushing bins in the toilets after work. Filtration and primary treatment and taking advantage of rainwater for use in irrigation and regulatory operations.

Scope 3, Commuting: These GHG sources are reduced by Ride Share using the University Shuttle and Carpool, by the decrease of burning of fuels. In addition, the use of bicycles reduces the GHG source. An application was developed for smart phones, by the students at the Faculty of Pharmacy- Alexandria University that enables faculty members to share cars for transportation in a safe manner (Green Cycle project). In addition, regular vehicle maintenance is performed to reduce greenhouse gas emissions.

- **A cooperation protocol was established with ETHYDCO to convert 10 university vehicles (Buses) into environmentally friendly grey vehicles by converting them to run on gas along with fuel.**

Scope 3, Air travel: The University usually support the travel of Faculty members and student once every two years for attending conferences. Lately, since the covid 19 pandemic, and the increase in air travel Tickets, the support of travel was stopped.

Scope 4: Innovation and Technology Development for the Investment in Green Technologies:

There are also many research projects to reduce greenhouse gas emissions, including, for example:

1. Monitoring pollutants using satellites (a project funded by the Academy of Scientific Research and Technology 2021).
2. Confronting rampant heat waves and climate change (World Bank financing 2023).
3. Confronting severe air pollution and black cloud episodes (World Bank financing 2023-2024).
4. the research project entitled: Utilizing alternative feed materials to maximize milk and meat productivity and reduce methane production in ruminants, funded by the Science and Technology Fund STDF-DDP No. 18575
5. The research project entitled Safe milk and meat production and greenhouse gas emissions from ruminants fed with the addition of nano-silt, funded by the Science and Technology Fund STDF- Innovation in the period from 2020-2023.

A list of 126 projects which have an impact on the reduction of greenhouse emission and climate change are listed in the evidence file “2.14. Impactful university program(s) on climate change”.

Scope 5: Digitalization, by promoting digital solutions.

The General Framework for Digital Transformation at the University and the Center and Units for Measurement, Evaluation, and E-Learning as a Practical Example of Digital Transformation for that Purpose.

- 1- Alexandria University began its serious efforts to develop processes in preparation for their digitization in 2017, where a committee for development, monitoring, and administrative reform was established to analyze processes, eliminate waste, and conserve university resources. The committee also examined the merging and unification of documents for the various processes at Alexandria University



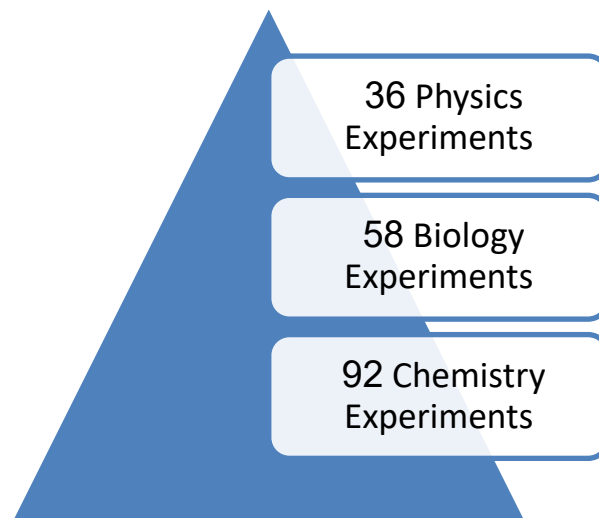
and its faculties. The digital transformation of the measurement and evaluation system at Alexandria University began in 2018.

- 2- The Education Development Projects Management Unit funded four projects before 2018 to establish measurement and evaluation units.
- 3- Three additional projects were funded after 2018 for the digital transformation of evaluation processes in three faculties. The university also completed the digital transformation in the remaining faculties through its own efforts, utilizing resources from the electronic testing project. The total funding for the most recent project was 3,799,519 EGP, and the outcomes have reached an advanced level in areas such as question banks and the use of modern applications in practical exams.

Virtual Labs

Virtual Labs were established in Alexandria University to give the opportunity for instructors and their students to practice various kinds of labs remotely without being physically present in the lab.

Virtual Labs are 3D virtual labs for students to practice physics, biology and chemistry lab Experiments (attached example of the system used).





https://praxilabs-lms.com/dashboard

Dr. Shaimaa Elmorsy
Account Admin

DASHBOARD

Welcome to PraxiLabs

Total Number of Students' Attempts	Total Number of LMS Content/Launchers	Total Number of Experiments
0	184	184
Total Number of Instructors	Total Number of Administrators	
157	2	

Package (Apr 10, 2023 - Jun 1, 2024) Remaining 10000 students of 10000 students

Experiments

No Experiments

https://praxilabs-lms.com/experiments/experiment

Dr. Shaimaa Elmorsy
Account Admin

- Physics
- Chemistry
- Biology
- Heat and Thermodynamic Experiments
- Mechanics
- Properties of matter
- Electricity
- Magnetism
- Modern Physics
- Waves Experiments

Show 10 Entries

Search:

- Archimedes principle
- Black Body Radiation and Stefan-Boltzmann Law of Radiation
- Ballistic Pendulum
- Boyle's law
- Characteristics of Solar Cell (i) Dark and illumination I-V characteristics of a solar cell.
- Characteristics of Solar Cell (ii) Effect of the exposed area, and the intensity of the incident light on
- Characteristics of Solar Cell (iii) Study of the Spectral Dependence of the I-V Characteristics as w
- Convex Lens

https://praxilabs-lms.com/experiments/experiment

Dr.Shaimaa Elmorsy
Account Admin

Physics

Chemistry

Biology

Basic Radical tests (Inorganic Chemistry)

Organic Chemistry

Acidic Radicals tests (Inorganic Chemistry)

General Chemistry

Analytical Chemistry

Show 50 Entries

Search:

(Strong acid / strong base titration) HCl/NaOH.

Analysis of a mixture containing sodium hydroxide and sodium carbonate

Aspirin titration (weak acid / strong base titration)

Claisen Schimdt Reaction (Mixed Aldol Condensation)-Synthesis of dibenzalacetone

Determination of concentration of acetic acid in its commercial Solution

Determination of concentration of chlorides in water sample (Volhard's method)

Determination of concentration of citric acid in soda

Determination of concentration of silver nitrate by Fajan's method

https://praxilabs-lms.com/experiments/experiment

Dr.Shaimaa Elmorsy
Account Admin

Physics

Chemistry

Biology

Physiology

Biochemistry

Cell Culture

Toxicology

Bioenergetics

Biochemistry

Molecular Biology

Immunology

Microbiology

Show 50 Entries

Search:

2D Protein Electrophoresis

Affinity Chromatography and HPLC

Agarose Gel Electrophoresis of DNA

Amylase test

Antibiotic Sensitivity Test (Disc Diffusion Method)

Bacterial Plating Out Technique Experiment (Streak plate method)

Bioenergetics

Building a Model for Catalytic Interactions

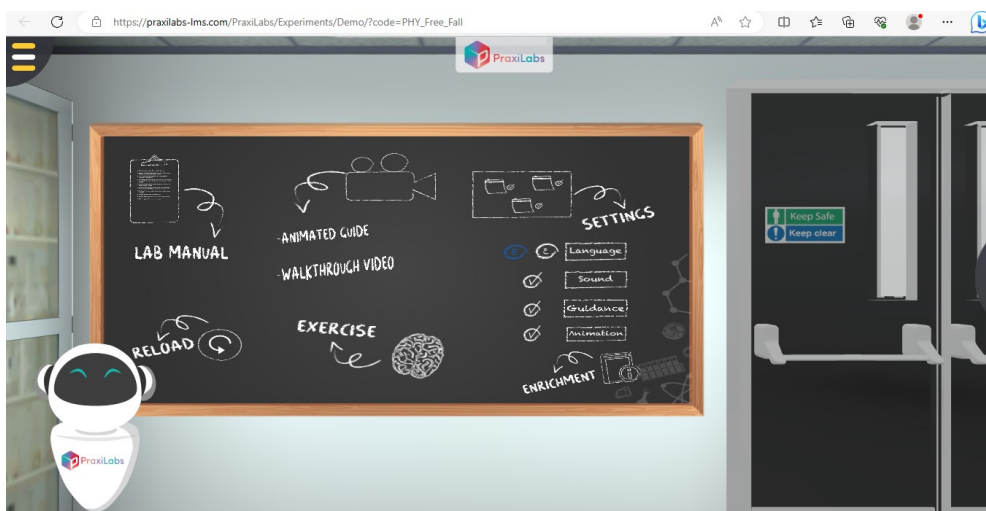
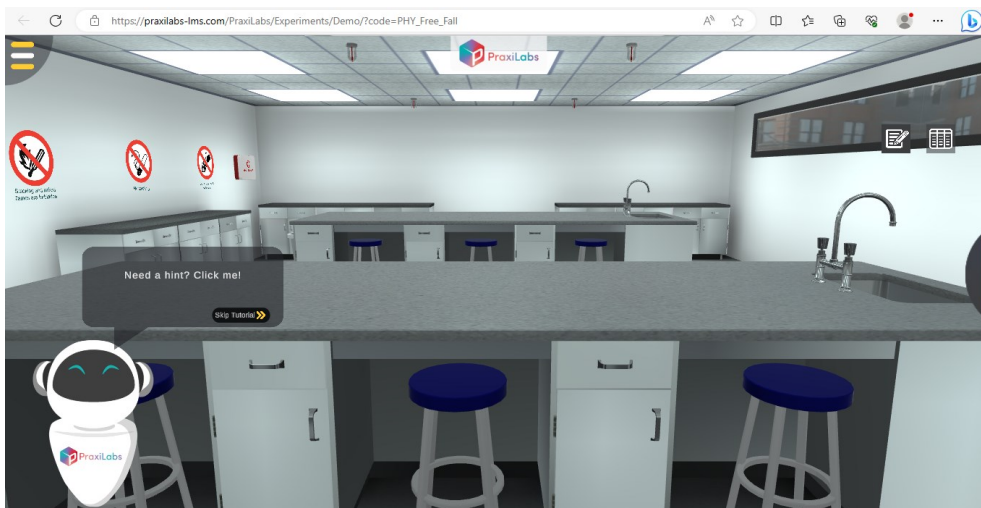
https://praxilabs-lms.com/users/instructor

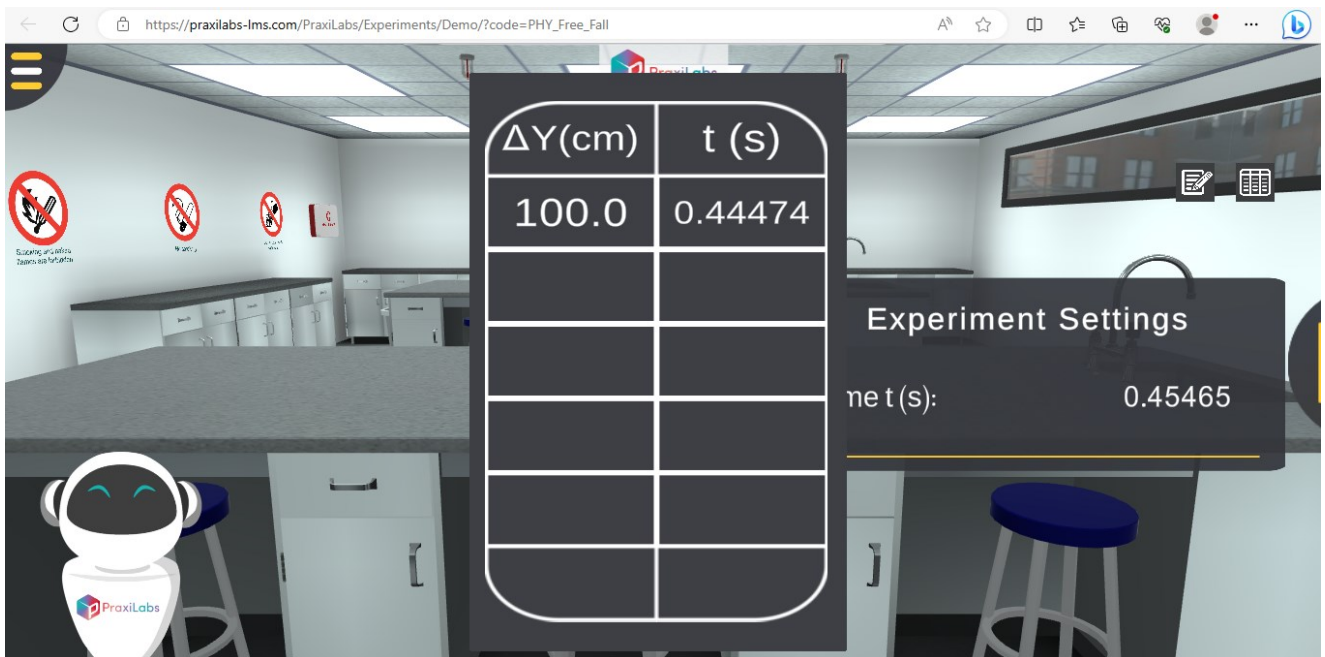
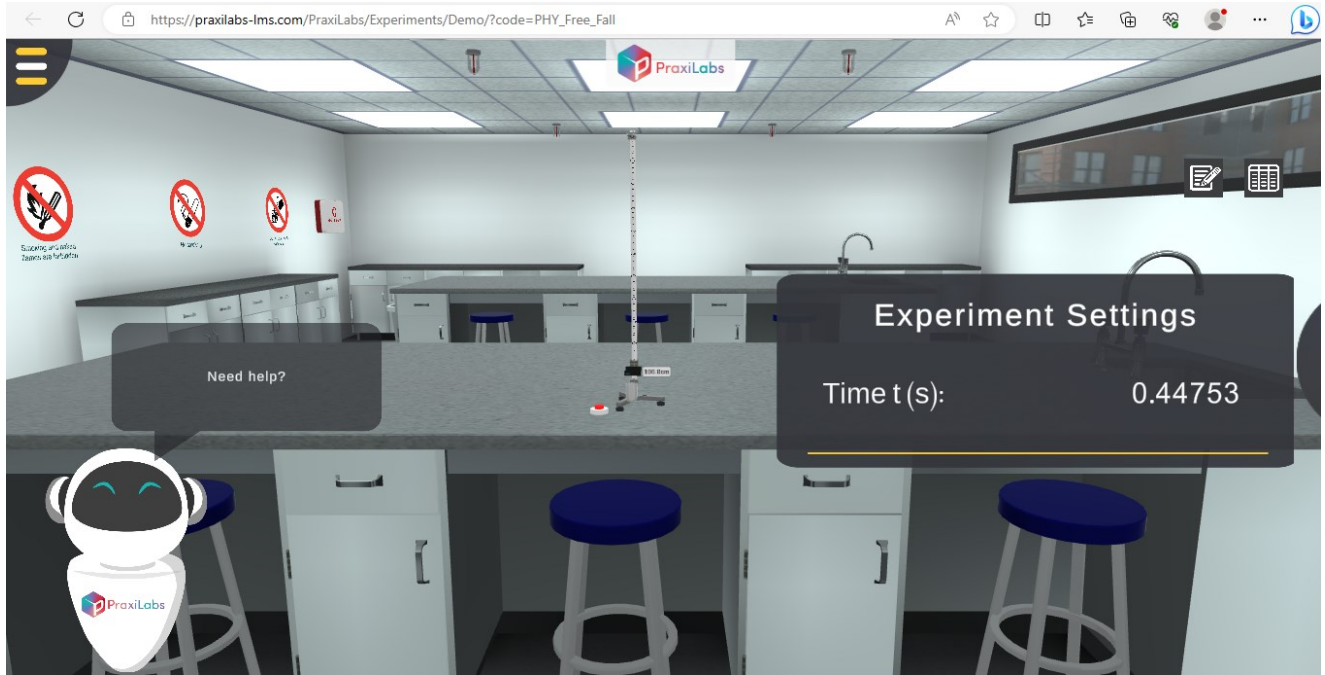
Dr. Shaimaa Elmorsy
Account Admin

Available Instructors

Show Entries Search:

#	First Name	Last Name	Email	Phone Number	Actions
1	Omar Hamad		omar.wesal@alexu.edu.eg		✎ ✖
2	Eman Moustafa		eman.nameir@alexu.edu.eg		✎ ✖
3	Magdy Farag		magdy.farag@alexu.edu.eg		✎ ✖
4	Alaa Ezzat		alaa.ezzat.m@alexu.edu.eg		✎ ✖
5	Samar Saleh		samar.saleh@alexu.edu.eg		✎ ✖
6	Ahmed Sorour		ahmed.sorour@alexu.edu.eg		✎ ✖
7	Doaa Saied		doaa.saeed@alexu.edu.eg		✎ ✖
8	Mohamed Mshaly		m.mshaly@alexu.edu.eg		✎ ✖







Electronic Exam Halls (Alexandria University, EGYPT)

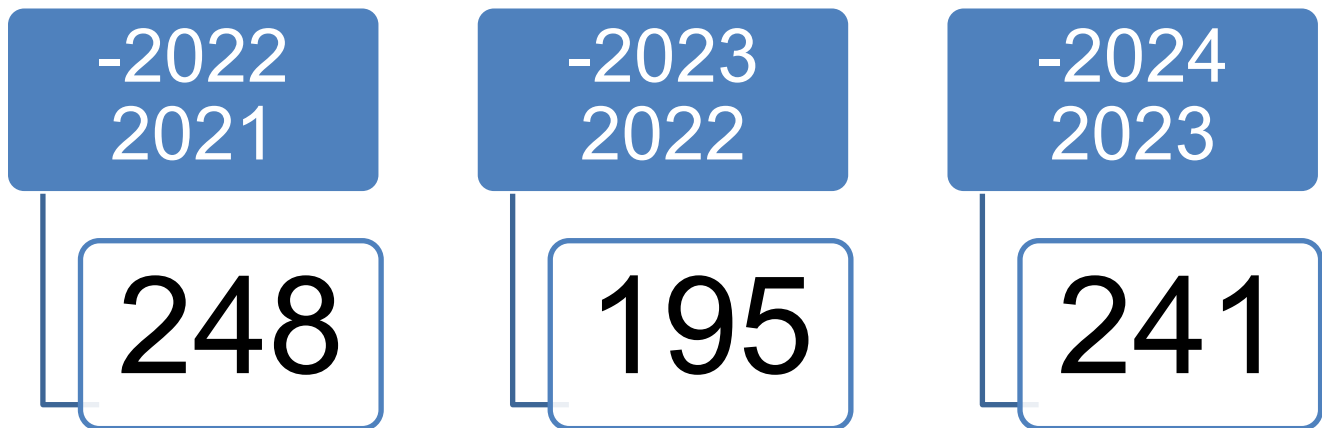


Electronic Exam Halls at the Faculty of Medicine (Alexandria University, EGYPT)



New Electronic Exam Halls at the Faculty of Nursing (Alexandria University, EGYPT)

The total number of electronic exams in academic years 2021/2022, 2022/2023, 2023/2024



Some electronic forms used in managing the performance of the educational process, including academic and examinations, for Egyptian and international students, and for faculty members and support staff.



قياس رضا الطلاب عن عمليات التقويم والا
متحانات للفصل الدراسي الأول (خريف) للعا

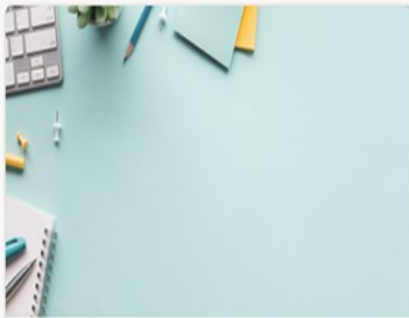
riham hassan
2683 responses



استبيان الخريجين

riham hassan
2291 responses

Measuring student satisfaction with assessment methods in Alexandria University



E-exam الاختبارات الاليكترونية

riham hassan
181 responses



مرحلة البكالوريوس -- استمارة المتابعة اليو
مية للعملية الامتحانية نهاية فصل الخريف

riham hassan
2869 responses



مرحلة الدراسات العليا -- استمارة المتابعة ال
يومية للعملية الامتحانية نهاية فصل الخريف

riham hassan
1912 responses

1-E-exam

2- Daily follow-up form for the educational process for the undergraduate studies.

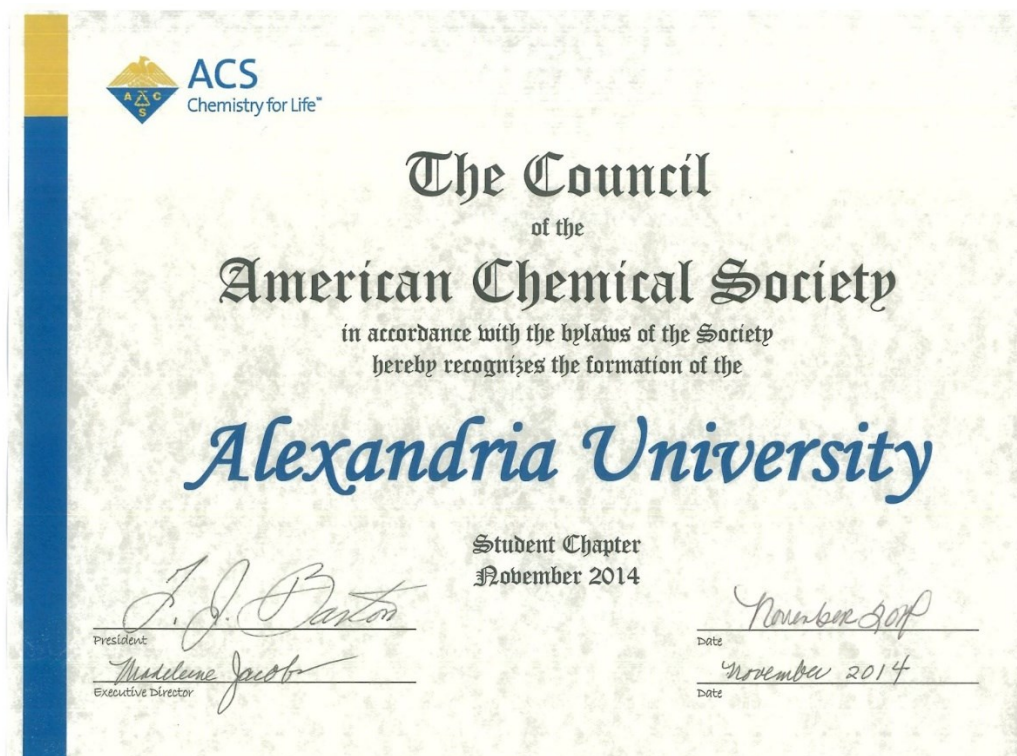
3- Daily follow-up form for the educational process for the potgraduate studies.



Weekly follow-up form for the educational process for the undergraduate and postgraduate courses during the semester.

Scope 6: Public Awareness and Behavioral Change through Educational Campaigns. This is accomplished by raising awareness about the importance of reducing GHG emissions and the role individuals can play in everyday actions, such as reducing energy use, recycling, and adopting sustainable transport.

One of the success stories in Alexandria University is the establishment of the Interantional ACS Alexandria University Student Chapter, which contributed significantly since its establishment in November 2014 in the awarness students and development of skeels of the undergraduate and postgraduate students. In addition, to the outreach activity performed for the awarness of school students.





Student chapter awards:

Recognition

Student chapter awards:

- Commendable Award 2018
- Honorable Award 2019
- Outstanding Award 2023
- Green Chemistry Award 2024
- Outstanding Award 2024



A copy of the e-mail receiving from the ACS Committee to congratulate us of the Chapter achievements on the 4th of October 2024 (attached as an evidence).

Kindly find a part of the e-mail, which indicate the feedback from the reviewers:

Dear Alexandria University,

Congratulations on achieving a **Outstanding ACS Student Community Award for the 2023-2024 academic year!** To help you in the future, please read the feedback from the reviewers:

You had an amazing year this year with so many areas to celebrate. You have a real talent for outreach events, and I love that you used some of your professional development activities to train your volunteers in proper techniques. It is good that you thought about safety, including running some events outdoors, and your idea of integrating RAMP analysis into your outreach next year is a great one. I hope you are able to do that RAMP work next year.

Your Chemistry Café work is a perfect example of great professional development moments, with public speaking, outreach events, and a chapter development activity all in one event. Well done! You might want to consider if it would make sense to offer one of these events as a webinar, to be inclusive of those who cannot make the event in person. Since one of your most successful events was a webinar talk, it might be a good idea to consider other online events.






Your plans for next year include a social media officer which is a perfect fit for your chapter and chapter strengths. You have a great roadmap for what that officer will do in your chapter, and I know that it will only add to your chapter's success next year.

Keep up the awesome work!

You have also received a Green Chemistry Award! Please read the feedback from the Green Chemistry Institute:

Congratulations! Your chapter has earned a Green Chemistry Award. You completed the minimum number of activities; however they are well described and have good Green Chemistry content. We hope to see new/additional activities submitted by your chapter in future years. Please strive to be leaders in this area and inspire other student chapters to learn about Green Chemistry. Please note that the ACS Green Chemistry Institute will be providing additional guidance to assist student chapters with learning about Green Chemistry throughout the 2024-25 academic year.

Scope 7: International Collaboration and Partnerships is performed by collaborating with other countries and institutions to share knowledge, technology, and expertise on GHG emission reduction.

-  International Partnerships : Partnerships with world-class universities across the globe through bilateral/multilateral agreements and their follow-up
-  Visiting Professors
-  Supporting Alexandria University Branches in South Sudan, Chad, and Malaysia
-  Students mobilities and Exchange
-  Study Abroad strategy through double and joint degrees



Agreements With AU In Numbers

- European Countries : 52 signed + 37 waiting final approvals
- Asian Countries : 11 signed + 19 waiting final approvals
- North & South America Countries : 15 signed + 14 waiting final approvals
- African Countries : 7 signed + 6 waiting final approvals



- Arab Countries : 23 signed + 13 waiting final approvals

DUAL AND JOINT DEGREES IN NUMBERS

Dual Degrees : 49 with 5 countries

- (U.K. / U.S.A./ France/ Italy/ Spain)

Joint Degrees: 3 with 2 countries

- (U.K. / France)

Potential Programs: 87 with 8 countries

(U.K. / U.S.A./ France/ Italy/ Germany/ Canada/ Austria/ Malaysia)

Additional evidence link: <https://alexu.edu.eg/index.php/about-us-ar>

Link for LED lighting:

https://alexu.edu.eg/index.php/?option=com_content&view=article&id=5935&catid=21&lang=ar-AA

Link for Solar Energy:

https://alexu.edu.eg/index.php/?option=com_content&view=article&id=5936&catid=21&lang=ar-AA

Link for Sustainable Development: <https://alexu.edu.eg/index.php/en/sustainable-development>

Link for Green University:

https://alexu.edu.eg/index.php/?option=com_content&view=article&id=5932&catid=21&lang=ar-AA

Links for Green Cycle project

https://drive.google.com/file/d/1-1rdgtkuRXQ3qkqWNAyhZ7jcJ_7LscfY/view

<https://alexuuni->

my.sharepoint.com/:v:/g/personal/radwa_ewaisha_alexu_edu_eg/Ee3t6KrqrnRGol6CRQtc81IBaiqxKAjj8L6E0qthOzs9XA?e=xHRgTa

<https://fb.watch/mzqhBHazV4/?mibextid=j8LeHn>

https://drive.google.com/drive/folders/15Tbf3hUjvFksE_suXkqycqpX8g4sV0Ni?usp=drive_link

https://drive.google.com/drive/folders/1waCoAbnuCs7_wsKvjLCQjtQUOCCgclF09?usp=drive_link

https://drive.google.com/drive/folders/1gvVuFCsUejSxGIKsJ4zoxe4Idn_ewDF?usp=drive_link

https://drive.google.com/file/d/1yQnpwgyMGGoTqLNUyb60xgokKG21ZCwp/view?usp=drive_link

https://drive.google.com/file/d/1HdgRPIZvQ6zscAiGmY0VSnvQ9LgOZ9RZ/view?usp=drive_link

https://drive.google.com/file/d/1sfttbKmPzZWYhCTosYQMLwd0c6IAfoq/view?usp=drive_link

<https://www.figma.com/file/Szikt682DveoqQD4VYxKz/green-cycle?type=design&node-id=0-1&mode=design>

Alexandria University's Research on Greenhouse Gas Emissions

- Researchers from various faculties at Alexandria University have been conducted 731 research articles and reviews, within 2023-2024, to mitigate the Greenhouse Gas Emissions across different scientific fields.

Google Scholar

🔍

Articles
About 731 results (0.11 sec)

Any time

Since 2024

Since 2023

Since 2020

Custom range...

2021
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2025

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Sort by relevance

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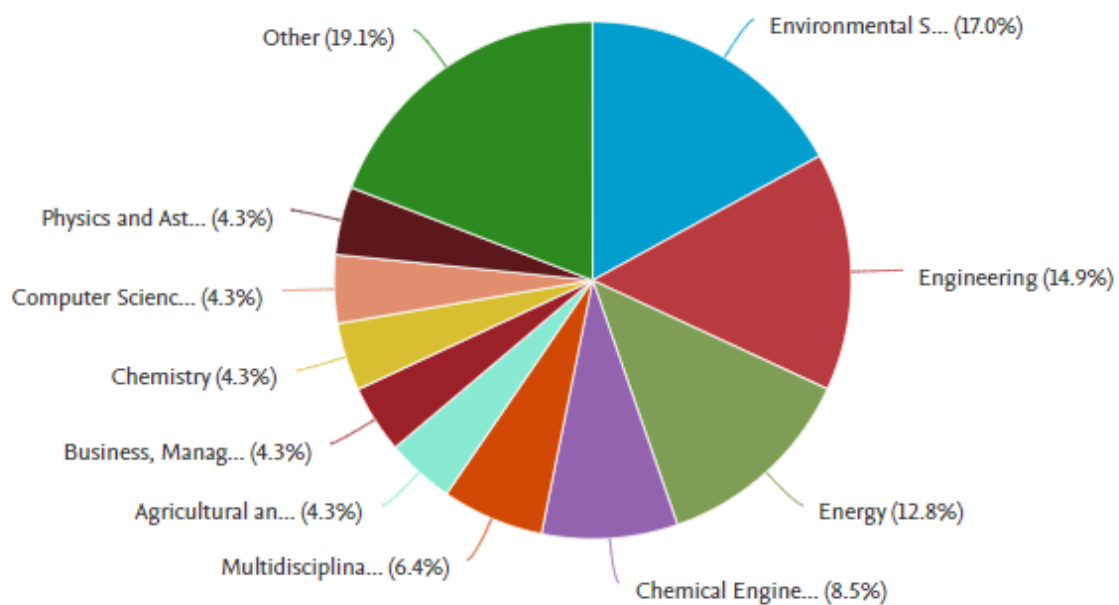
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CO2 Emissions, Green House Gas Calculations and Controlling in the Gas Plant
[EE Ebrahim](#), [AA Noaman](#)... - Egyptian Journal of ..., 2021 - ejchem.journals.ekb.eg
 ...) a given type and amount of **greenhouse gas** may cause, using the functionally equivalent
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[HTML] Thermo-economic analysis of potential desalination processes utilized by no greenhouse gas emissions power plant
[WM El-Ashmawy](#), [WM El-Maghlany](#), [M Elhelw](#) - Alexandria Engineering ..., 2024 - Elsevier
 ... Finally, a comparison is conducted to study the effect of using nuclear power plant
 instead of conventional power plant on the production of **greenhouse gas** emissions. ...
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Experimental and Techno-Economic Analysis of Solar PV System for Sustainable Building and Greenhouse Gas Emission Mitigation in Harsh Climate: A Case Study ...
[EM Abd Elsadek](#), [H Kotb](#), [AS Abdel-Khalik](#)... - Sustainability, 2024 - mdpi.com
 ... caused by the increasing escalation of **greenhouse gas** emissions, such as carbon dioxide
 ... support climate change mitigation by curbing **greenhouse gas** emissions but also plays a ...
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Clean Technologies and Environmental Policy (2023) 25:3131–3148
<https://doi.org/10.1007/s10098-023-02599-9>




REVIEW



A comprehensive overview of carbon dioxide, including emission sources, capture technologies, and the conversion into value-added products

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Estimating greenhouse gases emissions from large wastewater treatment plants using different methods - (Case study: Alexandria, Egypt)

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Examples of Alexandria University's Research on Greenhouse Gas Emissions

Alexandria University Awareness program

- Awareness program toward energy and Climate Change was implemented by Alexandria university through initiatives, conferences, workshops, and activities.



Alexandria University Organizes "Climate Changes and Green Transformation" Symposium during 2023.



A total of 28 postgraduate students and young faculty members concluded their Water-Energy-Food (WEF) Nexus Training. WEF Nexus is a four-week training program that took place at [The American University in Cairo](#) from August 5th to September 2nd, 2023.

The goal of the school was to provide participants with a comprehensive understanding of the interrelations between water, energy, and food (WEF).

The training covered the following:

- The WEF nexus and its importance for sustainable development
- The latest practices and technologies in the area of WEF
- Hands-on project activities that enable participants to implement the theories they gain
- Teamwork and interdisciplinary collaboration



Alexandria University Professors and Students Won First Place in the Innovation and Patent Production Index at the Cairo International Innovation Fair 2023. Alexandria University secured first place in the innovation and patent production ranking and won second place, along with a silver medal, for new and renewable energy projects, particularly for the green hydrogen and green ammonia production project.



Alexandria University President Attends Preparatory Webinar for COP28 Climate Conference. The webinar discussed many important topics, including climate change and dry lands, food security, biodiversity, energy and sustainable development, political will and human solidarity needed for change, adaptation, African youth's view of climate change, the Egyptian perspective on climate change, and funding requirements.



Alexandria University President Attends “Life for Medeca” Conference Third Edition, which aims to green transformation of ports and maritime activities in accordance with international standards, in order to preserve environmental safety of the Mediterranean region. The event took place at the Bibliotheca Alexandrina, in the presence of Ms. Margot Marcaroli, representative of the French Ministry of Overseas.



Alexandria University participated in the 2022 forum of activities and events held by Egyptian public universities to address climate change. The university contributed a range of research topics related to climate change, alongside practical projects. These included the use of green hydrogen and green ammonia in fertilizer production, the establishment of a company for energy and water services, the localization of electric vehicle manufacturing within Egypt, the role of the Suez Canal in reducing global carbon emissions, the creation of the Alexandria University Center for a Greener Blue Economy, Egypt's role as a regional energy hub, and the establishment of the Alexandria University Center for Sustainable Development.



The Faculty of Agriculture at Alexandria University organized a symposium on meat production (October 2023), food safety, and climate change in cooperation with the Egyptian Society for Poultry Science. The annual symposium, titled “Strategies for the Sustainable Production of Animal Protein under Conditions of Climate Change,” highlighted climate change as one of the most significant challenges facing the world today. It emphasized that climate change affects many vital sectors, including animal production. It was explained that rising temperatures and shifting climate patterns lead to decreased animal productivity, increased production costs, and the emergence of new diseases.