#### IAU initiatives to upgrade existing IAU buildings to higher energy efficiency



Photo solar systems installation initiative to reduce monthly electricity bill payments:





Electric and affordable shuttle buses for the student and faculty

#### **Description:**

- 1. Activities for surrounding communities at national, regional, and international levels
  - 1.1. Initiatives and activities proposal:
  - 1.1.1. Photo solar systems installation initiative to reduce monthly electricity bill payments: It is one of the initiatives adopted by the University. Based on the installation of solar panels at the University in order to reduce spending on electricity bills. It has social, economic, and environmental implications, and it is Optimizing university resources and achieving university spending efficiency.

    (Source: report to the ministry of education, 856/01/04, 04/01/1443H)
  - 1.1.2.Electric Power Rationalization Initiative in collaboration with The National Energy Efficiency Services Company (Rationalization): It is one of the initiatives submitted by the University and has been adopted by the Authority for the Rationalization of Government Expenditures and Projects, based on the rationalization of electricity consumption in all units of the University; through the study of the causes of excess consumption and irrational use; and thus the implementation of a range of measures such as (updating the standard specifications of air conditioning, lighting and thermal insulation units in new buildings, and gradually replacing them in the old buildings) in cooperation with the National Energy Efficiency Services Company (Rationalization). (Source: report to the ministry of education, 856/01/04, 04/01/1443H)

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2. Educational materials at national, regional, and international levels" source: Annual report data for 2020/2021."

# 2.1. Training

#	Event	Information
1.	Principles of Sustainable Residential	Deanship of Community Service and Sustainable
	Neighbourhoods	Development + Faculty of Architecture and
		Planning
2.	Towards sustainable urbanization	Deanship of Community Service and Sustainable
		Development + Faculty of Architecture and
		Planning

## 2.2. Education Programs

#	Program	Collage
1.	The Engineering environment	College of Engineering
	- Bachelor of Science in Environmental Engineering	
	- Master of Science in Environmental Engineering	
	-Master of Engineering in Environmental Engineering	
2.	Mechanics and Energy Engineering	College of Engineering
	- Bachelor of Science in Energy Engineering	
3.	Environmental Architecture	College of Architecture and Planning
	- Bachelor of Environmental Architecture	
	- Master of Science in Environmental Architecture	

### 2.3. Research& education

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#	Event - research	Information
1.	Sustainable Development at Saudi Arabian	Sustainability (MDPI, Switzerland)
	Universities: An Overview of Institutional	https://doi.org/10.3390/su12198008
	Frameworks	
2.	A review of policies and initiatives for climate	Environment Development and
	change mitigation and environmental	Sustainability (Springer Nature)
	sustainability in Bangladesh	https://doi.org/10.1007/s10668-020-00627-y
3.	Fostering Urban Sustainability through the	Sustainability (MDPI, Switzerland)
	Ecological Wisdom of Traditional Settlements	https://doi.org/10.3390/su122310033
4.	People's perceptions of sustainable housing in	Housing, Care and Support (Emerald
	developing countries: the case of Riyadh, Saudi	Publishing Limited)
	Arabia	
5.	Sustainable Supply Chain Management in Smart	International Journal of Supply Chain
	City Design: A Case Study of Al Khobar City	Management
	Centre	
6.	Environmental and economic analysis of a	Energy Research-
	photovoltaic assisted mixed-mode solar dryer	
	with thermal energy storage and exhaust air	
	recirculation	
7.	Analytical Modeling and Optimization of a Heat	Sustainability
	Sink Design for Passive Cooling of Solar PV Panel	
8.	Greenhouse gas emissions are resulting, from	5th International Conference of Chemical
	medical waste collection and transport.	Engineering & Industrial Biotechnology
		(ICCEI Kuala Lumpur ,Malaysia
9.	Projection of Greenhouse Gas Emissions from	International Conference on Innovative
	Waste Sector	Applied Energy (IAPE'20), 15-16 Sept
		202 ,Cambridge ,United Kingdom
10.	"Towards Promoting Efficient Management of	International Journal of Built
	Mass-Housing Reconstruction Schemes."	Environment and Sustainability

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11.	"Integrated evaluation of the impediments to the adoption of coconut palm wood as a sustainable material for building construction"	Sustainability
12.	"Impact of COVID-19 on the social, economic, environmental and energy domains: Lessons learned from a global pandemic",	Sustainable Production and Consumption
13.	"Relationship between Weather Variables and New Daily COVID-19 Cases in Dhaka, Bangladesh",	Sustainability
14.	Sustainability, Eco-Point, and Performance of Green Lightweight Concrete using Saudi Local Waste	funded Research project 2021-2023
15.	Process optimization of cellulose nanocrystals from office paper waste and its utilization as a renewable additive for strong	funded Research project 2021-2023

# 2.4. Patents

#	Patents	Information
1.	Apparatus for solar-assisted water distillation	The United States Patent and
	using waste heat of air conditioners	Trademark Office