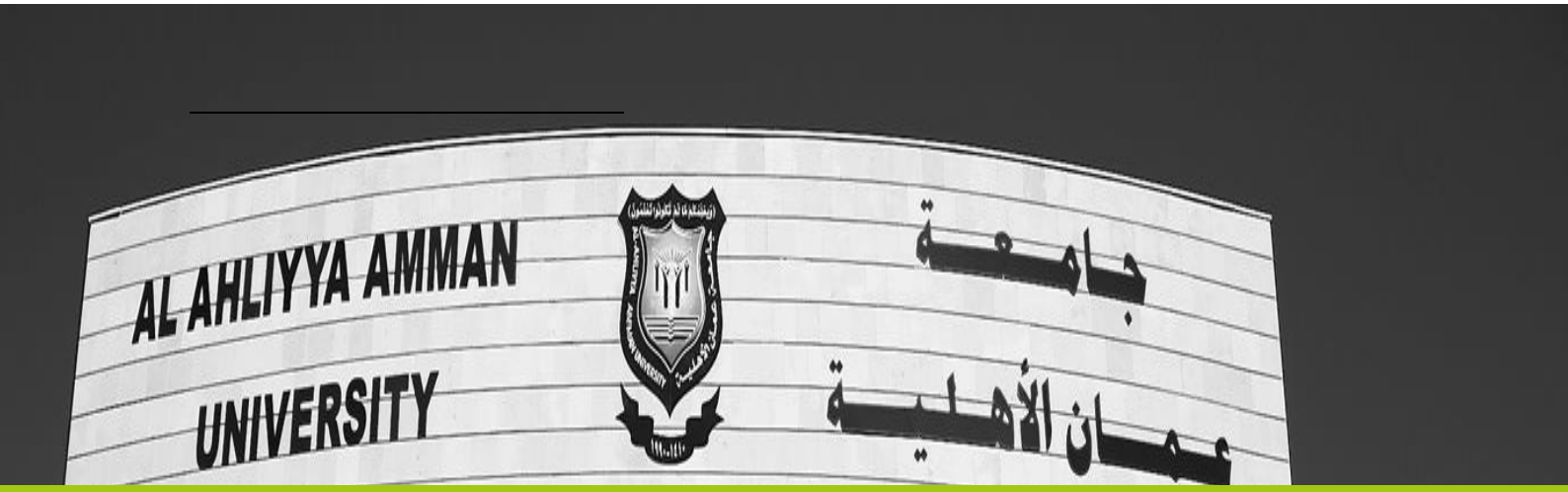
Al-Ahliyya Amman University

جامعة عمان الأهلية



AL-AHLIYYA AMMAN UNIVERSITY ENVIRONMENTAL SUSTAINABILITY REPORT 2017/2018

Contents

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ABOUT THE REPORT

This report provides a review of our sustainability performance of academic year 2017-2018. It contains data regarding our owned activities. The report is aimed at stakeholders who have an interest in our sustainability performance, including professional and academic staff, students, local communities and local businesses. It focuses on our material sustainability issues and those that are of interest to our stakeholders, and reflects the University's award winning whole institutional approach to sustainability. This report has been submitted with the approval of the University Management.

INTRODUCTION

Sustainable development has become a flagship of development in Jordan. Such development offers an opportunity to create environmentally efficient built environment by using an integrated approach to design so that the negative impact of buildings on the environment and occupants is reduced. It uses energy and water efficiently; as it is constructed from sustainable materials that are renewable resources - can be reused or have been recycled; applies efficient systems and creates a healthy, comfortable and attractive indoor environment. Sustainability relates to a set of concepts other than environmental performance; it considers environmental, social and economic-, and requires thinking long-term and assuming responsibility to the future. Sustainable development is one of the most important opportunities for improvement; so the World Summit on Sustainable Development (WSSD) Plan of Implementation suggested that governments are required to implement sustainable development. Therefore, sustainability has become a priority area for research in Jordan. Al-Ahliyya Amman University (AAU) sustainable development programme aims to establish a roadmap towards a green built environment, which will promote sustainable growth in Jordan.

VISION

Promote construction and capacity for creating a high performance built environment that is sustainable; comfortable; more energy and water efficient; and environmentally responsible, according to the Jordanian context.

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MISSION

Achieve the social, environmental and economic goals indicated in the vision by supporting and accelerating the adoption of green building construction, awareness, principles, education, policies, practices, standards and tools. This will help to create sustainable architecture and sustainable communities that are environmentally responsible, profitable, and healthy places to live, work and play.

GOALS

- To promote environmentally-responsible design and building methods and solutions based on principles of green building in Jordan.
- To contribute to capacity building for researchers and students in AAU.
- To participate in community awareness towards sustainability.
- To build collaboration and establish new research links locally and internationally.

OUR SUSTAINABILITY APPROACH

The AAU programme aims to facilitate sustainable development objectives- whether social, ecological, or economical- in Jordan and provide public recognition of AAU for leadership in sustainability. This concept introduces a methodology consists of four main components. These are technical procedure, capacity building, public awareness and joint projects. Under each of the components is a list of objectives relating to that component.

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UNITED NATIONS LAUNCHED THE SUSTAINABLE DEVELOPMENT GOALS (SDGS)

In 2015 the United Nations launched the Sustainable Development Goals (SDGs). These 17 goals with associated targets are to be achieved by 2030 through individual and collective action on a local to global basis. Institutions such as the University of Greenwich have a key role in highlighting the goals and applying and helping achieve them in our teaching, research and operations. The SDGs are relevant as almost every subject we teach will relate to at least one of them, opening up explorations into sustainability teaching and research.

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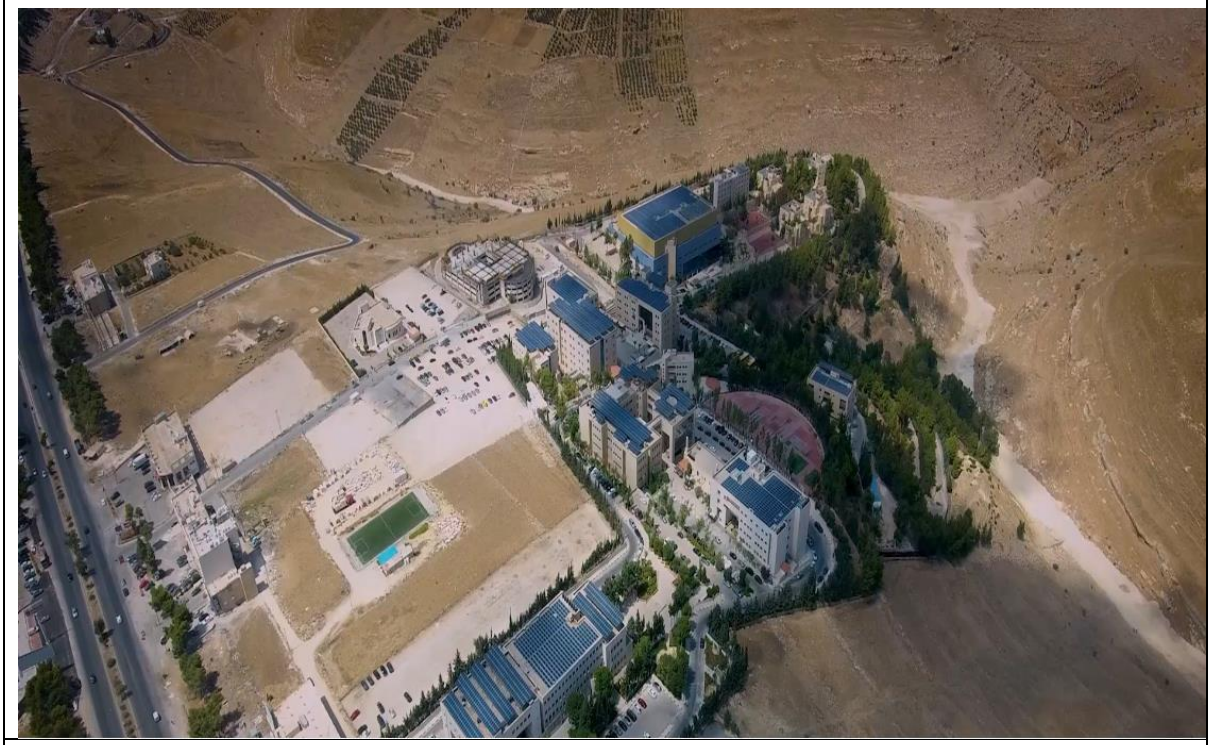
[1] SUSTAINABLE INFRASTRUCTURE

[1.1] Number of Campus Sites



Al-Ahliyya Amman University (AAU) campus site

Site plan of Al-Ahliyya Amman University (AAU)/ (Autocad file print)

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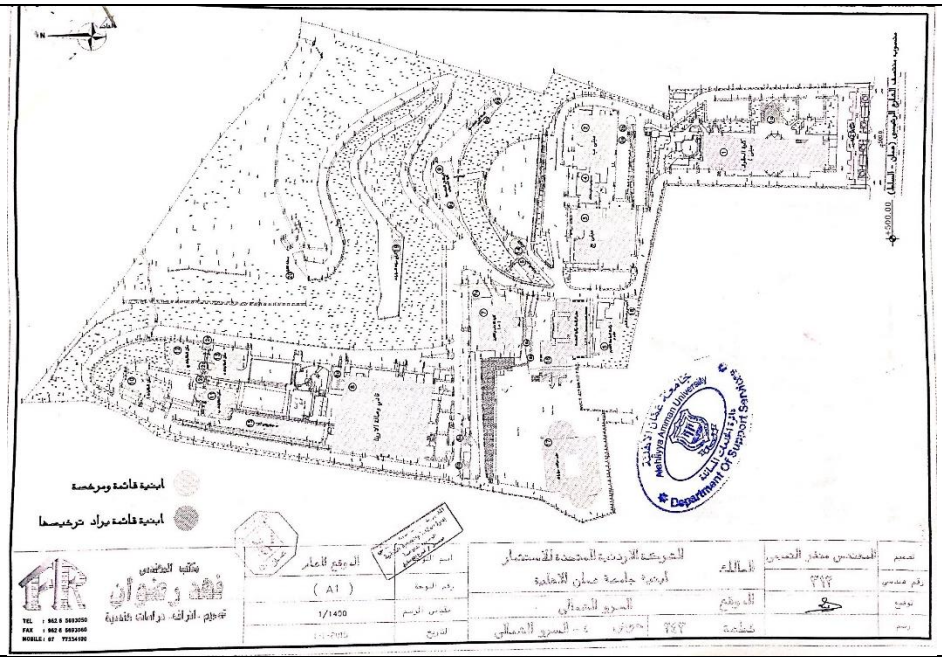

Site plan of Al-Ahliyya Amman University (AAU)/ (Official municipility document)

Description:

Al-Ahliyya Amman University (AAU) has one campus setting with a total land area of 185109.0 m². It is located in suburban setting between the capital Amman and the city of Al-Salt in a Mediterranean climate.

The campus consists of 21 permanent buildings (including academic actvities facilities, student residence, and services) and 9 temporary structures (including caravans, kiosks, and shelters). The total main campus building footprint is 22476.2 m^2 (21490.0 m^2 of the buildings and 982.2 m^2 of the temporary structures). These buildings and structures accounts 95068.0 m^2 of total area.

The total number of regular students (part time and full time) is 5828. Furthermore, the number of university staff is 646 (326 academic staff and 321 administrative staff).

Regarding finances, the university budget has grown last year to reach around US$ 31,664,714. About US$ 2,769,850 was used for sustainability infrastructure and efforts.

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[1.2] Campus Settings

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Al-Ahliyya Amman University (AAU) campus setting

South-East side of Al-Ahliyya Amman University (AAU) campus

Description:

Al-Ahliyya Amman University (AAU) campus has a suburban setting. AAU is located between the capital Amman and the city of Al-Salt. Officially, it is part of Balqa highland governorate; located in Al-Salt district. This district is distinguished by its hills, agricultural and highly forest cover. The total area of Al-Salt is 48.0 Km^2 (19.0 mi^2) and has a total population of 88900. The density is 1479/km^2 (3830/mi^2).

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[1.3] Total Campus Area (meter2)

Total campus area of Al-Ahliyya Amman University (AAU)

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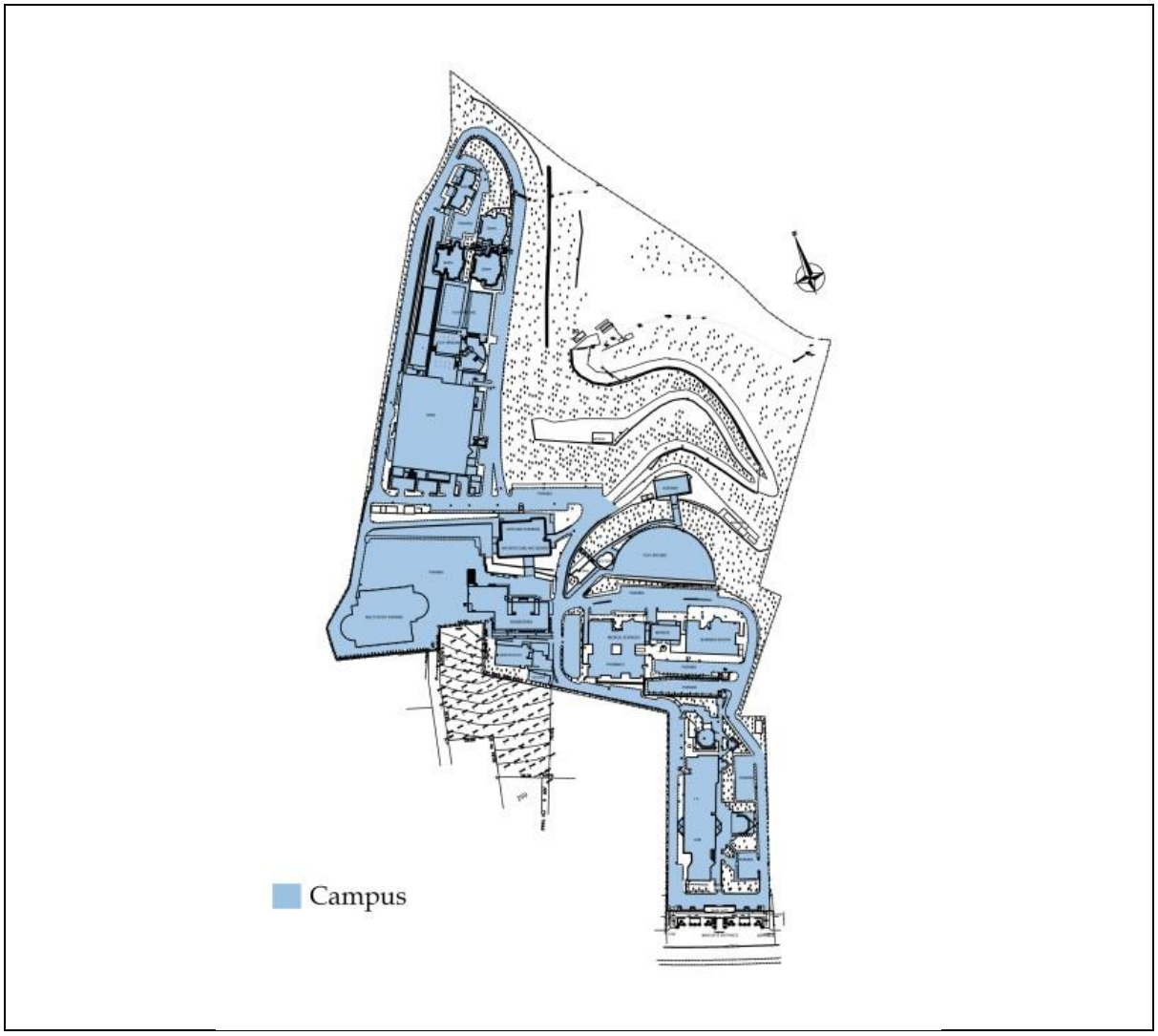

هاتف: ٠٥/٣٥٠٠٢١١/٢١٧ – فاكس: ٠٦/٥٣٣٦١٠٤ – مكتب بريد جامعة عمان الأهلية، الرمز البريدي ١٩٣٢٨ (عمان–الأردن)
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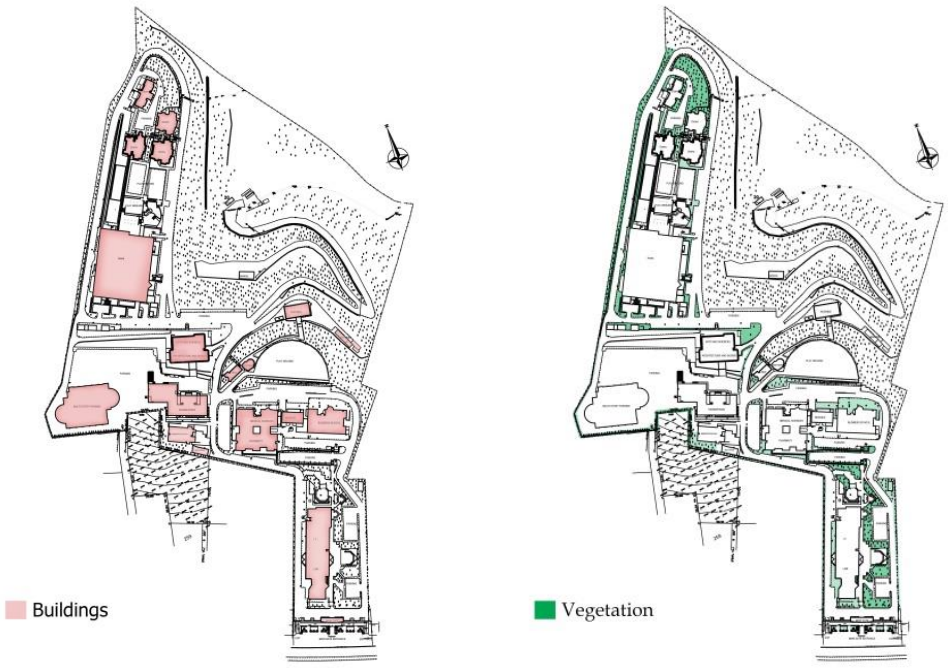

Al-Ahliyya Amman University (AAU) campus

Description:

The total land area of Al-Ahliyya Amman University (AAU) campus is 0.185109 km² (0.07143 mi²) = 185109.0 m^2. The total campus buildings area is 0.095068 km² (0.036706 mi²) = 95068.0 m^2 . The total ground floor area of buildings is 0.0224762 km² (0.0086782 mi²) = 22476.2 m^2 . The total area on campus covered in planted vegetation is about 0.015 km² (0.005792 mi²) = 15000.0 m^2. However, the total campus area where academic activities occur is 100004.5 m^2 .

Total area: 0.1000045 km² (0.038611953 mi²) = 100004.5 m^2
Total distance/circumference: 2.2 km (1.37 mi) = 2200 m

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[1.4] Total Area on Campus Covered in Forest Vegetation (meter2)

Land of Al-Ahliyya Amman University campus covered in forest vegetation

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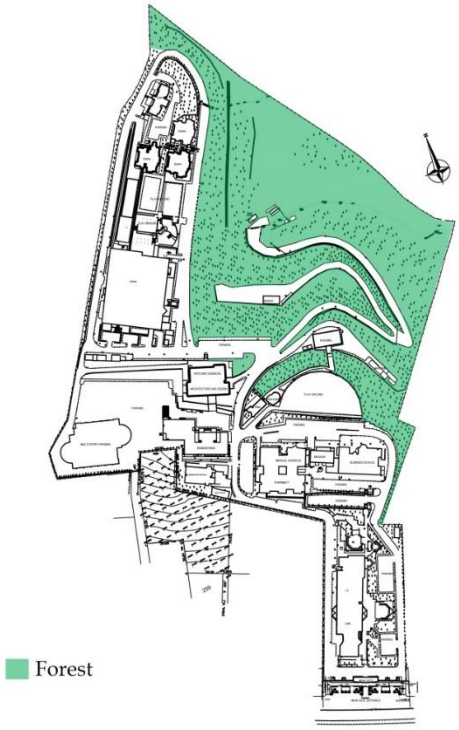

Total area of Al-Ahliyya Amman University campus covered in forest vegetation

View of the forest vegetation in Al-Ahliyya Amman University / Spring 2018

Description:

The total land area of Al-Ahliyya Amman University (AAU) campus is 0.185109 km² (0.07143 mi²) = 185109.0 m^2. However, the total area covered with forest vegetation is 75000.0 m^2.

Total area: 0.075000 km² (0.028958 mi²) = 75000.0 m^2
Total distance/circumference: 1.44 km (0.89477 mi) = 1440 m

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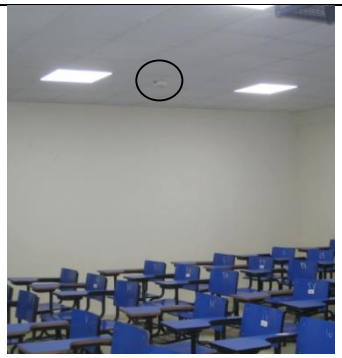
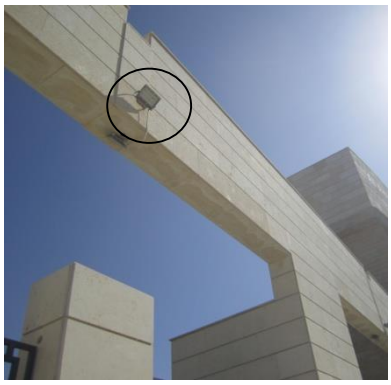
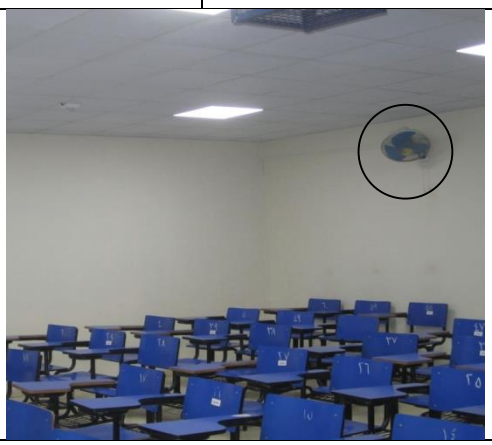
[2] CLEAN ENERGY AND CLIMATE ACTION

[2.1] Energy Efficient Appliances Usage

		
A++ Rated- energy efficient air conditioning units with inverter technology	LED indoor lighting units	Occupancy detectors inside lecture rooms
		
LED outdoor lighting units		Fans inside lecture rooms

Description:

Al-Ahliyaa Amman University employs different energy saving strategies for its campus. Energy efficient appliances are an important part of the university's sustainability efforts. A rated air conditioning units, LED indoor and outdoor lighting units, occupancy detectors and fans in lecture hall are installed in most buildings.

Appliance	Total number	Total number of energy efficient appliances	Percentage
Air conditioning units	200	200	100%
LED indoor lighting units	5000	5000	100%

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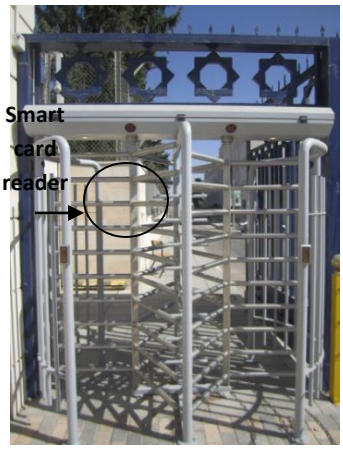
LED outdoor lighting units	500	500	100%
Fans	1000	1000	100%

[2.2] Smart Building Implementation

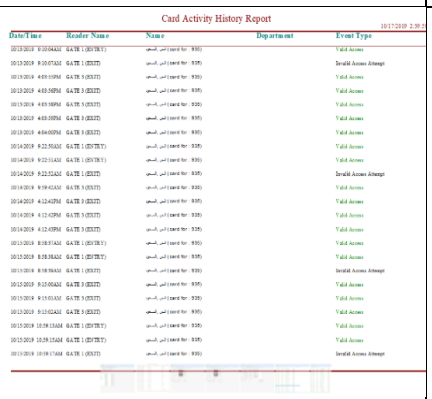


Smart gates (reading student or staff cards)

Smart car gates that reads staff car sticker

Smart sticker for staff cars (No student cars allowed inside campus)

Lecture hall card reader for students and academic staff


Card Activity History Report

Date/Time	Reader Name	Name	Department	Event Type
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10/12/2019 9:10:07AM	GATE 1 (EXIT)			Invalid Access Attempt
10/15/2019 4:05:16PM	GATE 3 (EXIT)			Valid Access
10/12/2019 4:05:56PM	GATE 3 (EXIT)			Valid Access
10/15/2019 4:05:58PM	GATE 3 (EXIT)			Valid Access
10/12/2019 4:05:59PM	GATE 3 (EXIT)			Valid Access
10/12/2019 4:06:00PM	GATE 3 (EXIT)			Valid Access
10/14/2019 9:22:51AM	GATE 1 (ENTRY)			Valid Access
10/14/2019 9:22:51AM	GATE 1 (ENTRY)			Valid Access
10/14/2019 9:22:52AM	GATE 1 (EXIT)			Invalid Access Attempt
10/14/2019 9:19:42AM	GATE 1 (EXIT)			Valid Access
10/14/2019 4:12:42PM	GATE 3 (EXIT)			Valid Access
10/14/2019 4:12:43PM	GATE 3 (EXIT)			Valid Access
10/14/2019 4:12:43PM	GATE 3 (EXIT)			Valid Access
10/15/2019 8:18:51AM	GATE 1 (ENTRY)			Valid Access
10/15/2019 8:18:58AM	GATE 1 (ENTRY)			Valid Access
10/15/2019 8:18:59AM	GATE 1 (EXIT)			Invalid Access Attempt
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10/15/2019 9:15:01AM	GATE 3 (EXIT)			Valid Access
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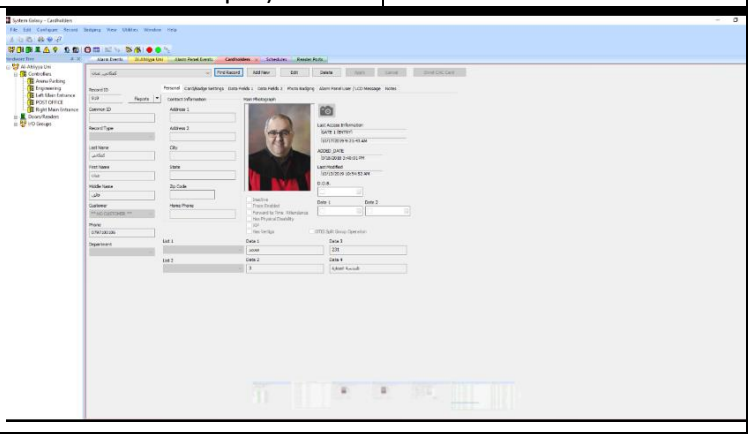

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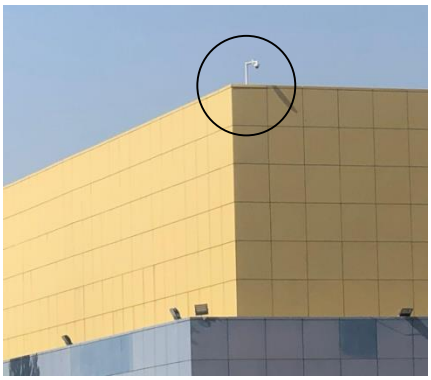
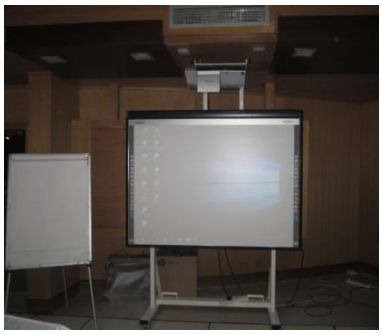
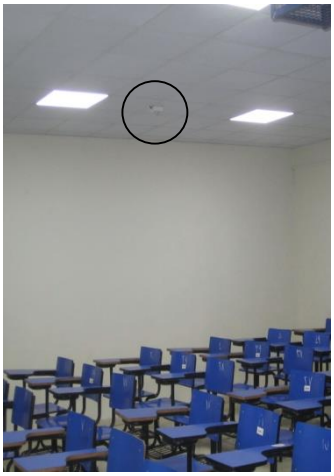
Card activity history report	Cardholders identification system

		
Elevator card reader for staff and the disabled	Finger print reader for adminstrative staff	Outdoor surveillance cameras in campus
		
Smart boards		Surveillance camera and smoke detector in all buildings
		

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Control room	Presence sensors for lighting classrooms
	
Internal courtyard in buildings for natural lighting	External courtyard between buildings for natural lighting
	
Natural lighting through skylight openings	

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No.	Name	Place	automation		Safety				Energy		Water		Indoor environment				lighting				Building Area (m^2)
			B1	B2	S1	S2	S3	S4	E1	E2	A1	A2	I1	I2	I3	I4	L1	L2	L3	L4	
1	AAU Building 1	Assalt-Jordan			X	X	X		X			X			X		X	X		X	9569
2	AAU Building 2	Assalt-Jordan			X	X	X		X			X			X		X	X		X	6756
3	AAU Building 3	Assalt-Jordan			X	X	X		X			X			X		X	X		X	10171
4	AAU Building 4	Assalt-Jordan			X	X	X										X				1058
5	AAU Building 5	Assalt-Jordan			X	X	X		X			X			X		X	X		X	2672
6	AAU Building 6	Assalt-Jordan			X	X	X		X			X			X		X	X		X	746
7	AAU Building 7	Assalt-Jordan			X	X	X		X			X			X		X	X		X	8447
8	AAU Building 8	Assalt-Jordan			X	X	X		X			X			X		X	X		X	19897
9	AAU Building 9	Assalt-Jordan			X	X	X		X			X			X		X	X		X	2141
10	AAU Building 10	Assalt-Jordan			X	X	X		X			X			X		X	X		X	1809
11	AAU Building 11	Assalt-Jordan			X	X	X		X			X			X		X	X		X	2437
12	AAU Building 12	Assalt-Jordan			X	X	X		X			X			X		X	X		X	2236
13	AAU Building 13	Assalt-Jordan			X	X	X		X			X			X		X	X		X	2236
14	AAU Building 14	Assalt-Jordan			X	X	X										X				148
15	AAU Building 15	Assalt-Jordan			X	X	X		X			X			X		X	X		X	3568
16	AAU Building 16	Assalt-Jordan			X	X	X		X			X			X		X	X		X	11522
17	AAU Building 17	Assalt-Jordan			X	X	X		X			X			X		X	X		X	7598
18	AAU Building 18	Assalt-Jordan			X	X	X										X				198
19	AAU Building 19	Assalt-Jordan			X	X	X										X				196
20	AAU Building 20	Assalt-Jordan			X	X	X										X				45
21	AAU Building 21	Assalt-Jordan			X	X	X		X			X			X		X	X		X	622
22	AAU Temporary buildings	Assalt-Jordan																			986

Total smart area: 92,437 m^2

Total building area: 95,068 m^2

هاتف: ٠٥/٣٥٠٠٢١١/٢١٧ – فاكس: ٠٦/٥٣٣٦١٠٤ – مكتب بريد جامعة عمان الأهلية، الرمز البريدي ١٩٣٢٨ (عمان–الأردن)
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Map showing university buildings top view

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Description:

One of the smart applications in Al-Ahliyya Amman University is the **smart card,** which was applied in the campus in 2016. The idea came to make students campus life easier, enhancing students and staff safety and increasing campus security.

We began this project by delivering the smart card to the students, each card with unique Identifier and we stored this identifier into our database system along with student's information.

After this step we started the phase 1 for the electronic gates and the project was in 2017, the phase consisted 4 double pedestrians gates, and 3 vehicle barrier gates and all of these gates were connected to access control panels with open database connectivity, that allowed us to import the students access rules to the access system directly from our own database in blink of eye without any remarkable issues.

The phase 2 project we added another 4 double gate in different locations in order to make easier to reach their campus.

All above the gates we built with highest safety rates to prevent any false incident.

Since the student have their smart with them we did the phase 3 project it all was about to mark the students entry /exit time to their class rooms in order and safe time and prevent any manipulation from any side for students absence and attendance . We accomplished this phase in two faculties and the vision is to cover the all for the class rooms and labs in near future.

The phase 4 was to add the access control gates to our transportation system so each bus was equipped with access control system in order to prevent any false entry to enhance students' safety because along with each system there is GPS with speed limiter and location control in order to maintain the correct route.

Since we believe in smartness and organizing, we did the phase 5 in order to organize the traffic for the elevators by adding smart readers for staff and the disabled to each elevator in the whole campus.

The phase 6 was adding barrier gates for the university campus, these gates will act automatically based on small UHF sticker mounted inside the vehicle of the university staff; for certain time and gates entrance in order to organize traffic.

We do like to add that all of above doors are connected to single platform. With this platform can perform in smart way in case of fire alarm, or robbery to take certain procedure automatically, with huge amount of logs and reports.

For the upcoming the future we will expand the smart card appliances in near future, such as bookshop printing services, library book renting, library entry and exit.

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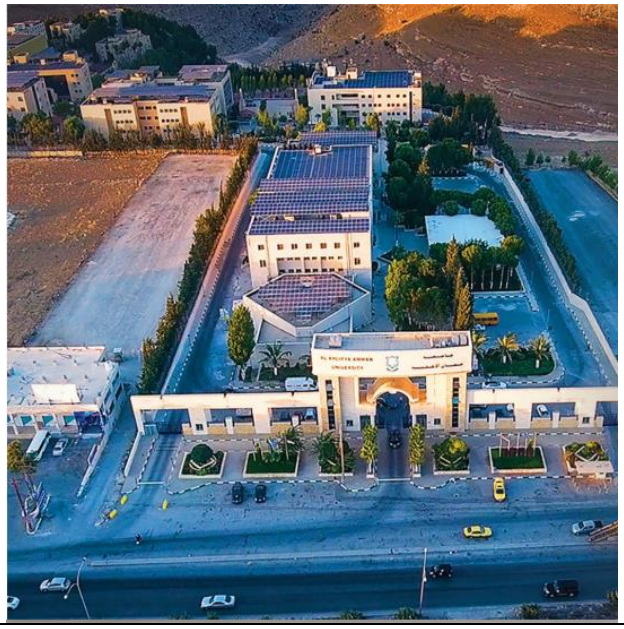
Finally we do believe that the safety and security for our students and staff is vital. Therefore, smart application to achieve this goal is necessary.

[2.3] Renewable Energy Sources in Campus

<table>
<tr><td>  </td><td>  </td></tr>
<tr><td colspan="2">Photovoltic roof for vertical car parking building</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td>Solar power convertor</td><td>Photovoltic panels on top of all building roofs</td></tr>
</table>

هاتف: ٠٥/٣٥٠٠٢١١/٢١٧ – فاكس: ٠٦/٥٣٣٦١٠٤ – مكتب بريد جامعة عمان الأهلية، الرمز البريدي ١٩٣٢٨ (عمان–الأردن)
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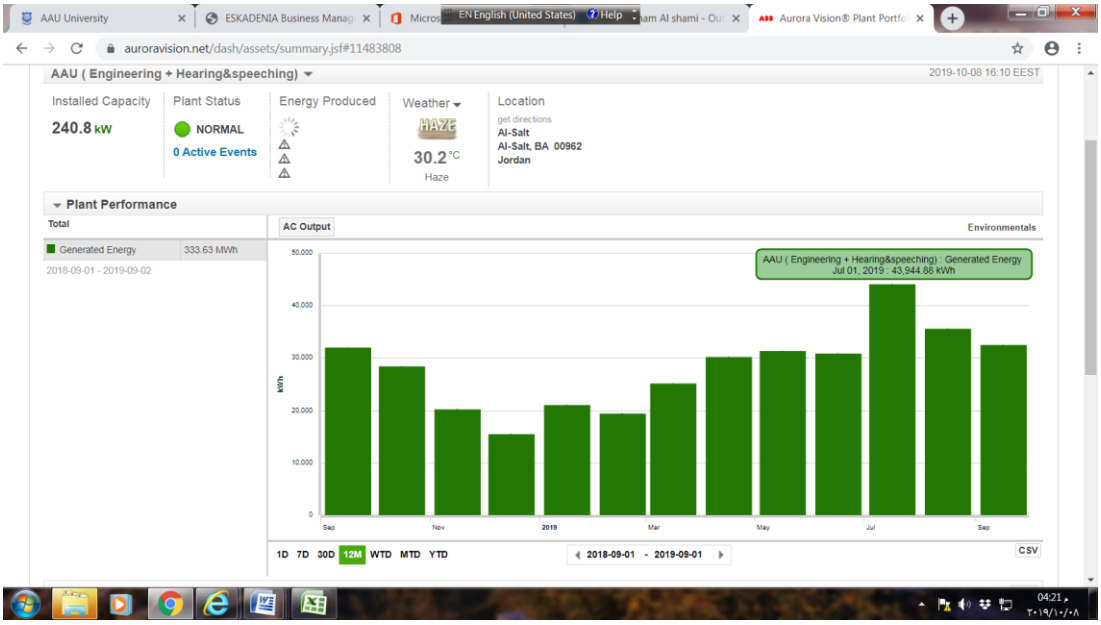

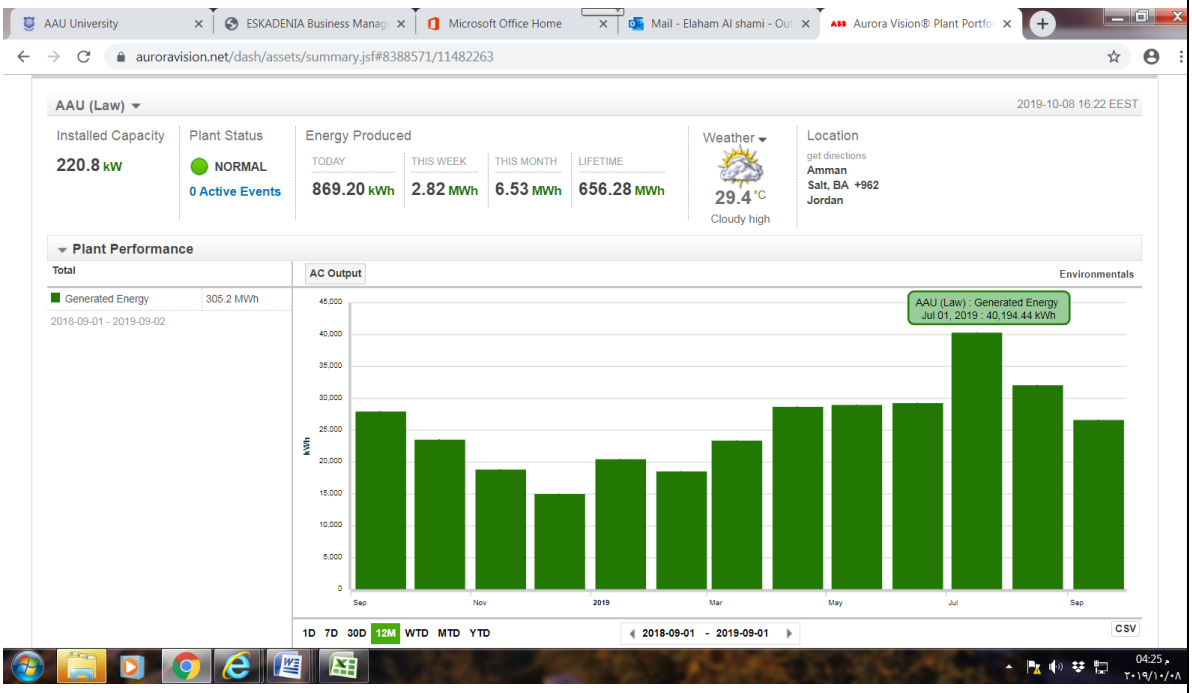

Monthly electricity generated by photovoltaic panels in some of the buildings at Al-Ahliyya Amman University – A monitoring software is used for each building

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Description:

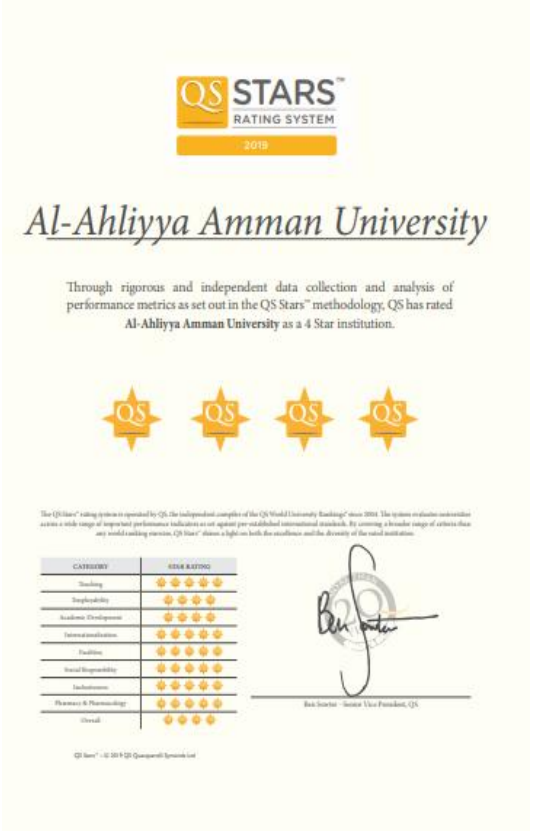
Jordan receives a large amount of solar radiation. Hence, most electricity in the campus is generated using solar power, through photovoltaic panels. The panels are installed on the roof of all buildings. Furthermore, the car parking building roof consists of solar panels that shade the cars, so overheating is reduced and the building is provided with necessary electricity.

The photovoltaic capacity is 2000 kWh
The photovoltaic panels generated 1,599,540 kWh in 2018

[2.4] Electricity Usage per Year (in kilowatt hour)

2,132,720 KWh/year

[2.5] Elements of Green Building Implementation in Construction and Renovation Policies

<table>
<tr>
<td> 
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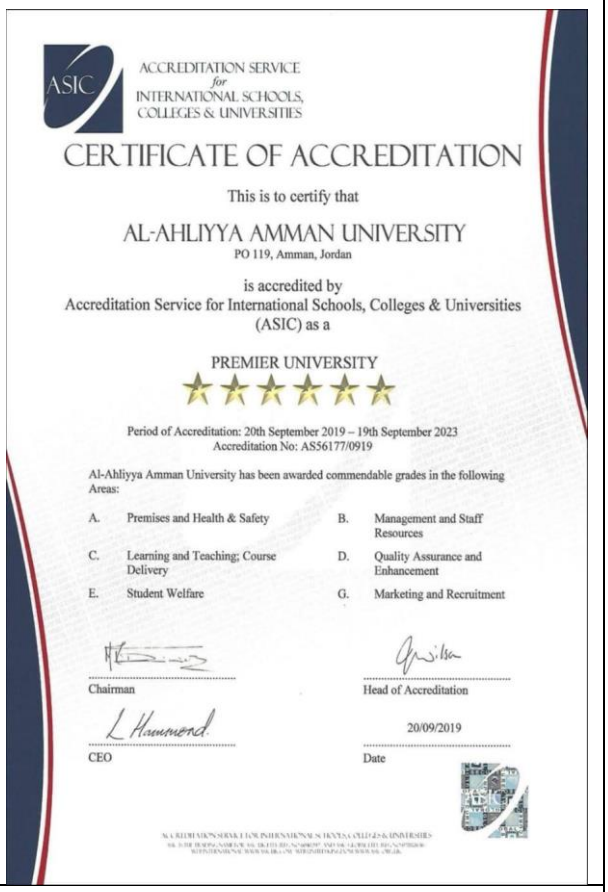
<td> 
</td>
</tr>
<tr>
<td>QS accreditation 2019 (5 stars in facilities)</td>
<td>ASIC accreditation (2019-2023)</td>
</tr>
</table>

هاتف: ٠٥/٣٥٠٠٢١١/٢١٧ – فاكس: ٠٦/٥٣٣٦١٠٤ – مكتب بريد جامعة عمان الأهلية، الرمز البريدي ١٩٣٢٨ (عمان–الأردن)
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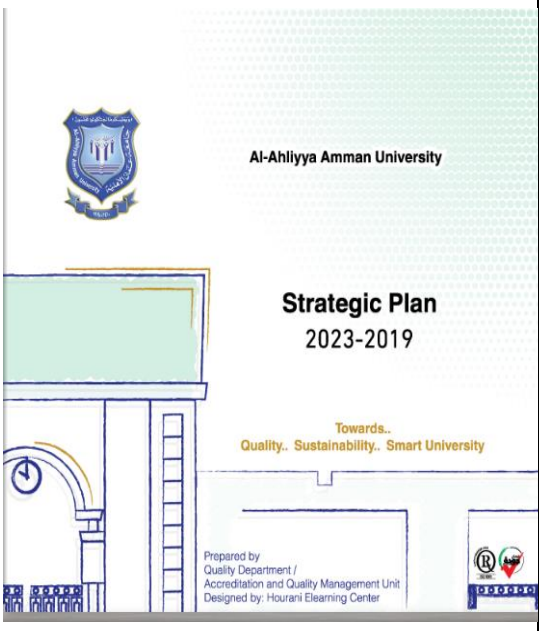
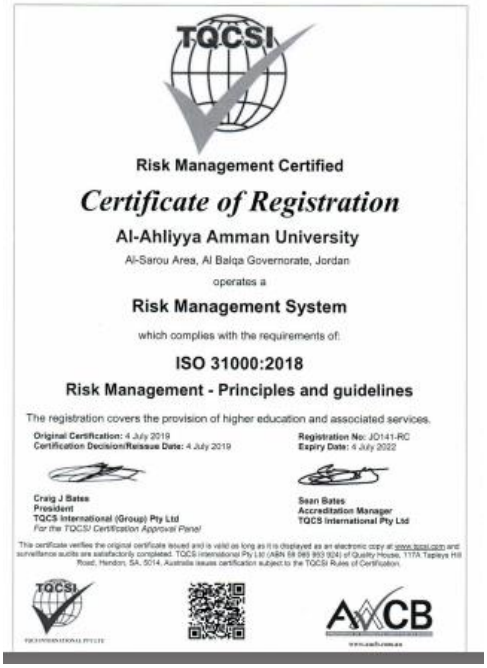
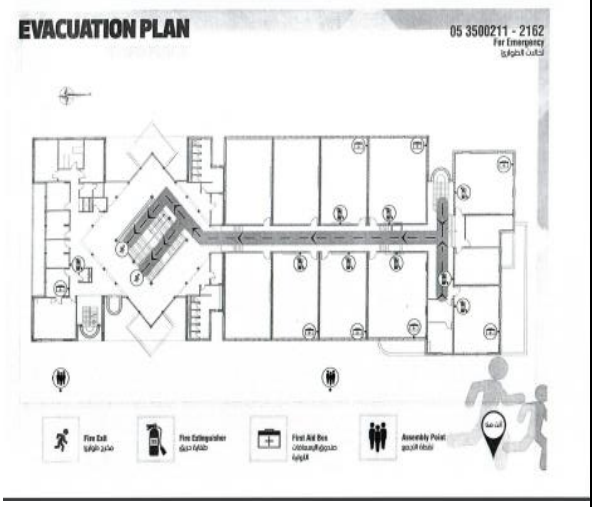
	
Al-Ahliyya Amman University Strategic Plan (2019-2023) Towards: Quality, Sustainability, Smart University	TQCSI Risk management certificate for AAU
	

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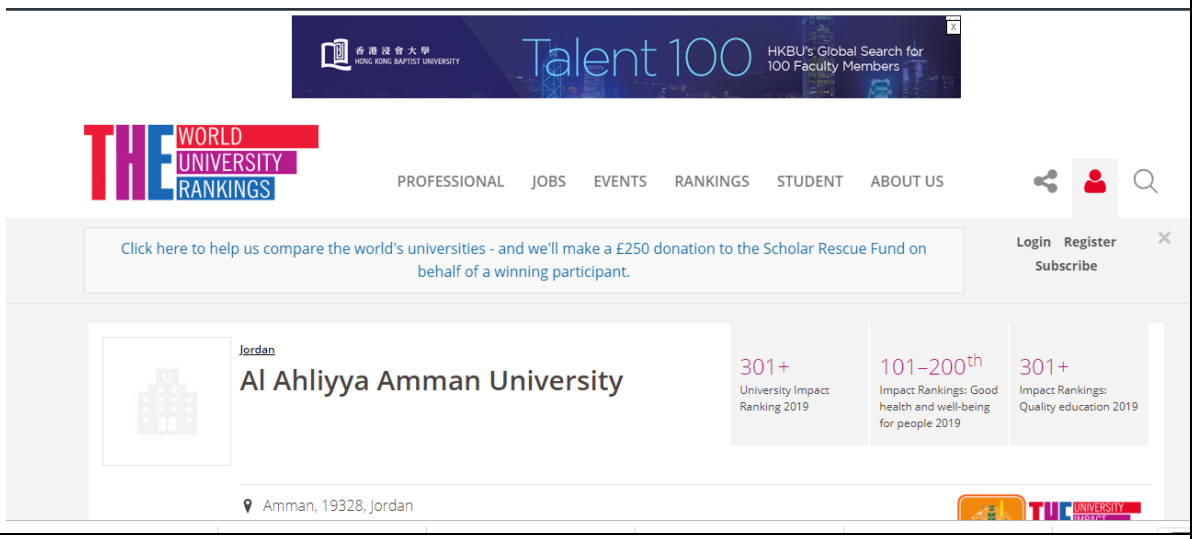
LR certificate for Al-Ahliyya Amman University (2018-2021)	Evacuation plan sample of a faculty building in Al-Ahliyya Amman University



The Times world university rankings (University impact, good health and well-being for people, and quality education)

Description:

Al –Ahliyya Amman University has been certified and accredited by many independent bodies in many aspects such as health and safety, risk management, facilities, and teaching. Al-Ahliyya Amman University is committed in the efficient management of energy, water and key material resources, and the minimisation of waste and emissions. We also work to integrate sustainability into our teaching and research, and work with our staff, students and our wider community to help raise awareness and drive behavioural change. The University shall undertake a continuous improvement process that seeks to meet the operational performance targets, goals, and objectives designed to achieve sustainability and environmental improvements.

<u>Water Management:</u>
Policy Statement:
To save and recycle water through efficient management.

Achievements:
More than 80% for Rain Water is saved and treated for reuse.
More than 75% of Water is Recycled.
More than 75% of Treated water is consumed.
More than 60% of Water Efficient Appliance Installed.

هاتف: ٠٥/٣٥٠٠٢١١/٢١٧ – فاكس: ٠٦/٥٣٣٦١٠٤ – مكتب بريد جامعة عمان الأهلية، الرمز البريدي ١٩٣٢٨ (عمان–الأردن)
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Solar Energy:

Policy Statement:

To generate the required Energy from the renewable sources.

Achievements:

More than 20,000 Meter Square area has been installed with Solar Panels. More than 1500 KW of Electricity is generated.

Transportation:

To implement the best practice for sustainable travel and transportation on and off campus such as walking, cycling, carpooling., and encouraging the use of hybrid or full electrical cars. Create awareness about green transportation program for the staff and students.

Waste Management:

Developing appropriate recycling infrastructure on campus. Create a Waste Management awareness programs for staff and students to know about the importance of waste management and the positive impacts to the mankind.

[2.6] The Total Carbon Footprint (CO2 emissions in the last 12 months, in metric tons)

CO2 electricity

= (electricity usage per year (kWh)/1000)* 0.84

=(2,132,720/1000)*0.84

=1,791 metric tons

CO2 (bus)

=((number of shuttle bus in university*total trips for shuttle bus service each day * approximate travel distance of vehicle each day inside campus only (KM) *240)/100)*0.01)

=((2*12*1.5*240)/100)*0.01)

= 0. 864 metric tons

CO2 (cars)

=((number of cars entering university *2*approximate travel distance of vehicle each day inside campus only (KM)*240)/100) * 0.02

=((290*2*1.5*240)/100)*0.02)

=41.76 metric tons

CO2 (motorcycle)

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=((number of motorcycle entering university*2*approximate travel distance of vehicle each day inside campus only (KM)*240)/100)*0.01)

No motorcycles allowed inside campus

CO2 (total)

Carbon footprint in 2018:

=1,791+0.864+41.76

=**1,833.62 metric tons**

[3] WASTE & RECYCLING

[3.1] Recycling Program for Waste

Recycling containers vision for University Waste

Description:

Since 2014 until 2019, Al-Ahliyya Amman University has supported real initiatives to awareness both of staff and students about the importance of recycling various materials, especially those produced on campus. This culture was disseminated through students systematic and non-systematic activities,

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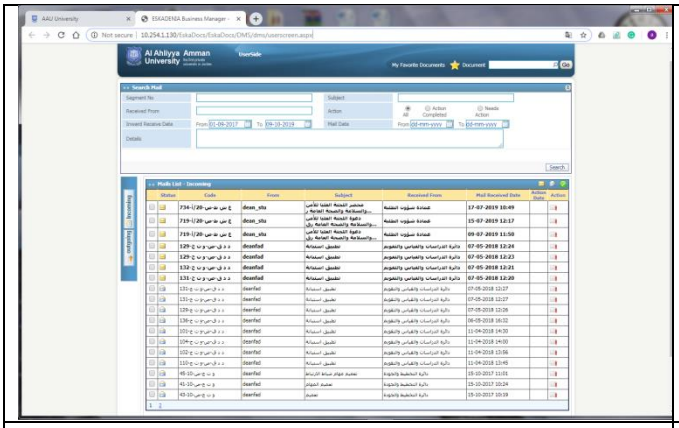
in addition to the dissemination of all elements contributing to this awareness, such as sorting materials containers.

[3.2] Initiatives to Reduce the Use of Paper and Plastic on Campus



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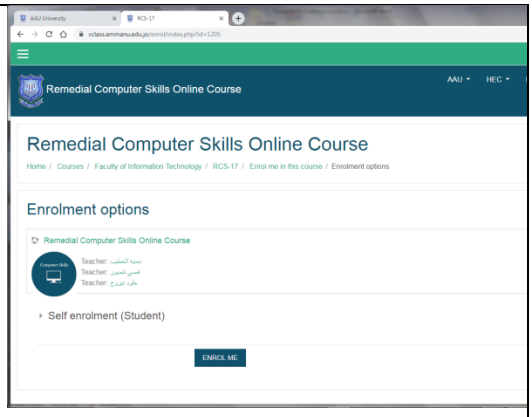

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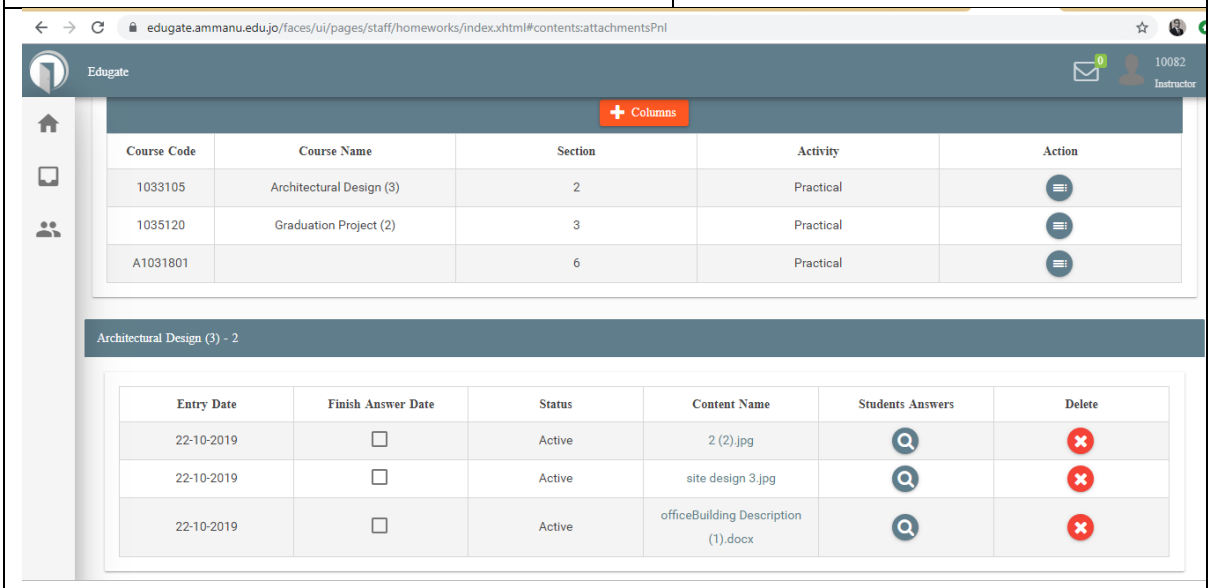

3

Example of Program to Reduce the Use of Paper and Plastic in Campus
Program for University Waste

Description:

1- One of the biggest steps taken by the University in reducing paper usage is the development of an electronic correspondence system in agreement with **ESKADENIA** for document management, which is used for internal correspondence between university facilities.

2- Another example to reduce the use of paper is the introduction of electronic teaching courses through the Internet and the student to take the exam held electronically in specialized laboratories, especially examinations level of English language and computer skills courses.

3- Instructors and students can upload assignments on their portal, reducing paper required for this purpose (edugate system).

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[3.3] Organic Waste Treatment

	
Example of Organic Waste Treatment	Example of cafeterias located on campus

Description:

At Al-Ahliyya Amman University, one of the most diverse sources of organic waste is from restaurants and cafeterias located on campus. The University has contracted with the **Zawati Company** specialized in the transport of organic waste after being collected in dedicated containers and distributed on campus to be treated outside the university by sound environmental methods. The university also offers awareness initiatives on the importance of treating organic waste due to the positive environmental benefits.

[3.4] Inorganic Waste Treatment

	
1	**2**

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3	**4**
Example of Inorganic Waste Treatment	

Description:

1- The Department of Supplies of the AAU stores and sorting inorganic wastes in private warehouses to be auctioned to private institutions for the treatment and recycling of these wastes
2- As part of the University's policies for the treatment of inorganic wastes, procedures have been put in place for the treatment mechanism through the conclusion of agreements for the supply of these materials with specialized companies for recycling paper sold to them by weight or replaced by paper again from the same company. An example of this is the agreement with the **Mahmoud Al Khalili Paper Recycling Foundation**.
3- Another example is the supply of used furniture and appliances to charities.
4- Another agreement is to sell inorganic wastes to specialized companies that process them in a sound environmental manner.

[3.5]Toxic Waste Treatment

Toxic Waste Treatment

Description:

At the AAU campus there is a maintenance station for buses periodically. These buses will result in toxic substances such as waste oils, damaged batteries and others. The University collects these

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toxic wastes in special barrels and transports them properly to oil treatment plants outside the university.

[3.6] Sewage Disposal

Special tank to transport treated water for agricultural purposes

Sewage Disposal in AAU

Description:

On campus of AAU there is a wastewater treatment and sewage treatment plant. The volume of this water is estimated at 60 to 100 cubic meters per day at the general rate. Where this water is collected in a tank and then transferred mechanically to three large containers after going through special filters and the capacity of each container 35000 litres treated every 12 hours. A careful laboratory examination of the purification results ensures its safety to the environment, and then is transported by special tankers used for vegetation on campus and surrounding agricultural land.

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[4] CLEAN WATER

Jordan is one of the poorest countries of water in the world. Due to lack of water resources, Jordan suffers from absolute water scarcity. Water availability is about 145 m^3 per person per year, and this is projected to drop to about 91 m^3 by 2025 (UN DESA, 2005. *Changing Unsustainable Patterns of Consumption and Production: Human Settlements and Water*). Therefore, Al-Ahliyya Amman University (AAU) considers water management as a major priority in its strategic plan.

Water Management:

Policy Statement:

To save and recycle water through efficient management.

Achievements:

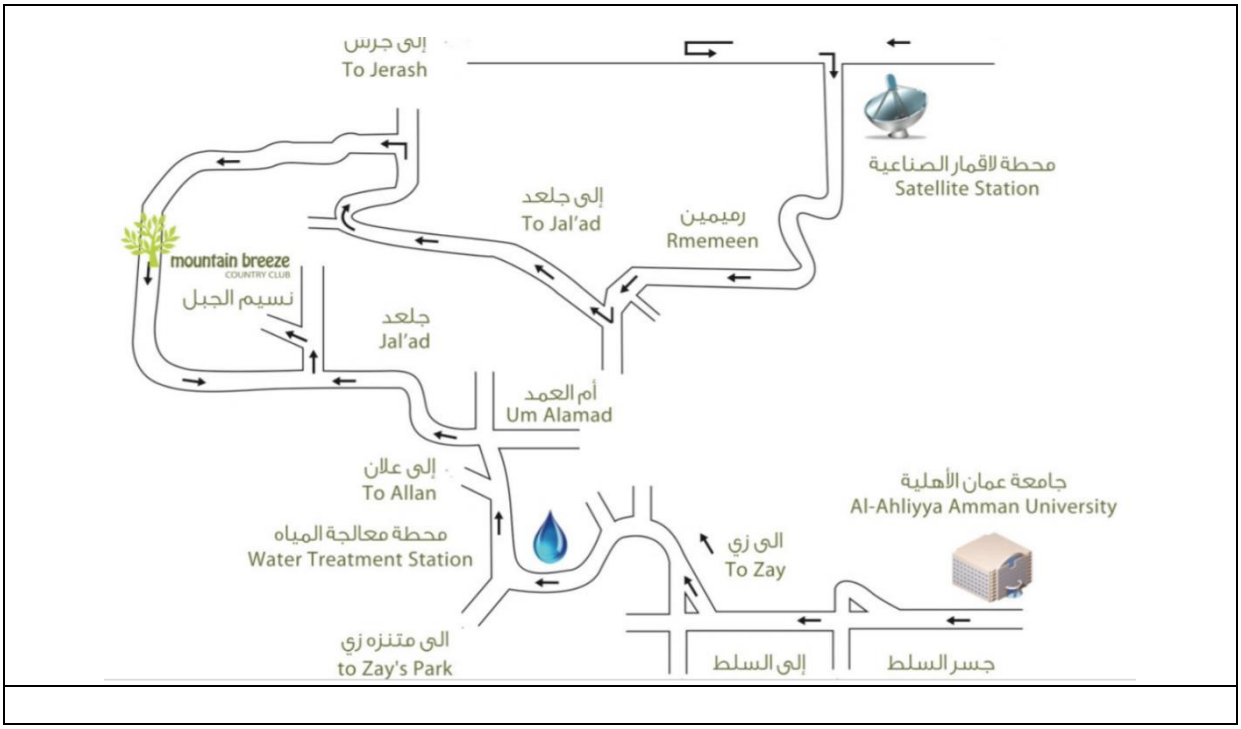
More than 80% for Rain Water is saved and treated for reuse.

More than 75% of Water is Recycled.

More than 60% of Water Efficient Appliance Installed.

More than 75% of Treated water is consumed.

[4.1] Water Conservation Program



هاتف: ٢١٧/٣٥٠٠٢١١/٠٥ – فاكس: ٠٦/٥٣٣٦١٠٤ – مكتب بريد جامعة عمان الأهلية، الرمز البريدي ١٩٣٢٨ (عمان–الأردن)
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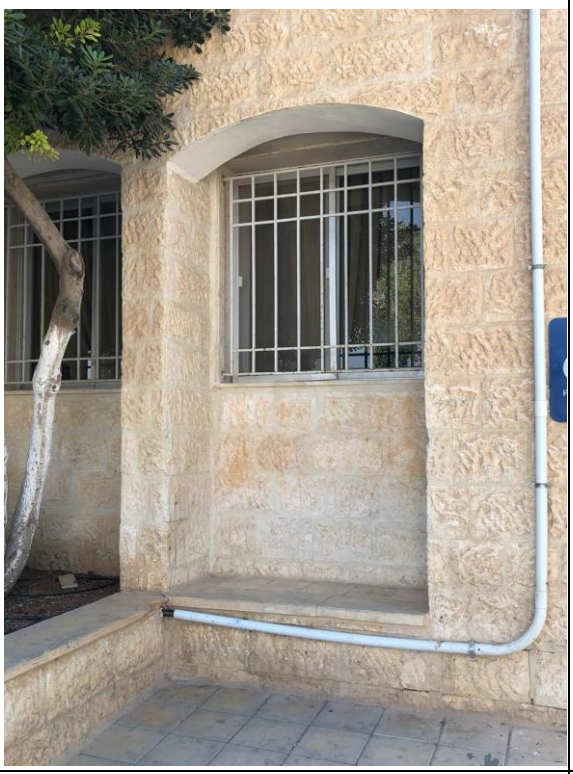
Water Saving Well (This room includes the water compressors)

Water Harvesting Copmressors



Water pipes

Water gutter

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Water Collector

Water canals

Water processing unit

Description:

AAU implements a water conservation program that focuses on three main issues; firstly, rain water harvesting, secondly, reducing the use of water, and thirdly, water recycling. Rain water surface gutters (water canals) on the ground level surround every building, in addition to several water pipes and gutters from the roofs of AAU buildings are used to collect rain water. Furthermore, curvature of roads were designed to redirect the water flow toward the valley; the lowest area in the AAU campus. Then the rain flow is collected as a ground water in artesian wells with a depth of 10m.

Achievements:

More than 80% of rain water is collected, saved and then treated for reuse.

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[4.2] Water Recycling Program

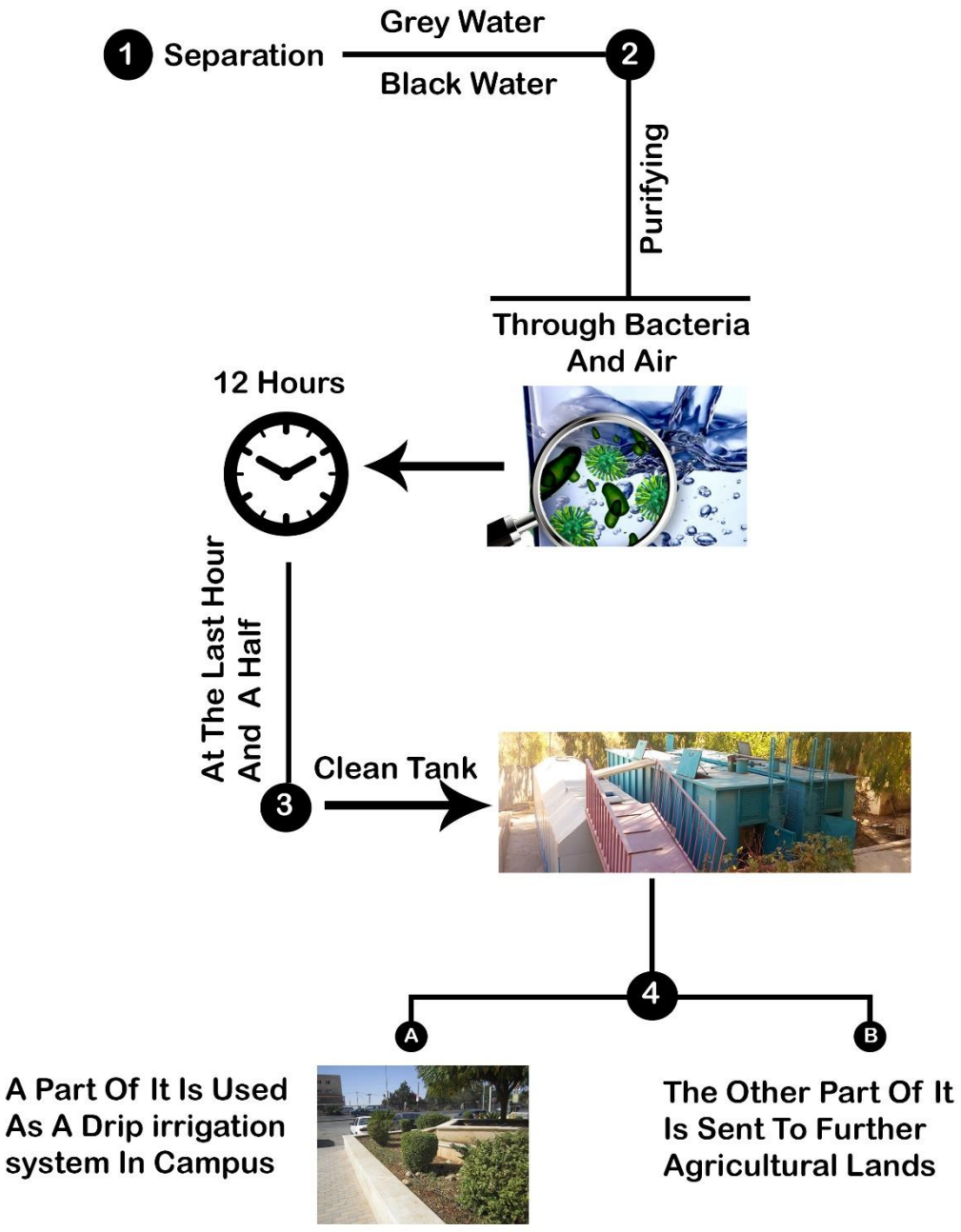

Diagram showing the water recycling program in Al-Ahliyya Amman University (AAU)

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Water Treatment Plant

Vegetations in the site of the treatment plant

Filter pipes

Filter

هاتف: ٠٥/٣٥٠٠٢١١/٢١٧ – فاكس: ٠٦/٥٣٣٦١٠٤ – مكتب بريد جامعة عمان الأهلية، الرمز البريدي ١٩٣٢٨ (عمان–الأردن)
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Transmission pipe

Liquid waste tank

Receiving pipes

Receiving tank

Containers

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Drip irrigation system

Drip irrigation system

Part of the recyled water in Al-Ahliyya Amman University (AAU) is used to water agricultural land outside the campus

Description:

Al-Ahliyya Amman University established a Purification Unit /Water Treatment Plant; where all used water is recycled and reused in the campus and surrounding planted lands.

Location of the Purification Unit is clean, smells so good and its green area contains so many organic plants. In addition; there is no insects in this area. This is due to the highly controlled process of the water treatment stages.

Process of treatment includes four main stages. Firstly, used water from sewage is collected by long pipes inside a large tank called receiving tank. This tank contains a filter to separate solid and liquid

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waste. After the separation, the solid waste is taken to purification plants to be converted to compost by means of perfusion mechanisms. While, the liquid waste is then transferred to another tank to be purified. In this tank, water is purified and treated by bacteria and air for 12 hours. At the last hour and half, treated water is transferred to clean water tank. After that, this water is sterilized by chlorine and transferred by 6 inch pipes.
It is also transported using containers that distributes a well-formed resin for irrigation and planting. The University also conducts a water examination at the faculty of pharmacy (parasite examination, and acidity).

The reservoir capacity is 70000 m^3. This water is very close to the purity of drinking water comes from governmental water authority.

The recycled water is reused for watering plants (drip irrigation systems) in the university campus. In addition, it is used to irrigate planted fields surrounding the university campus.

Achievements:
More than 75% of Water is Recycled.

[4.3] Water Efficient Appliances Usage (e.g. hand washing taps, toilet flush, etc.)

	
Example of men toilet unit in AAU	Example of women toilet unit in AAU

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Dual toilet flush

Toilet paper with sensor

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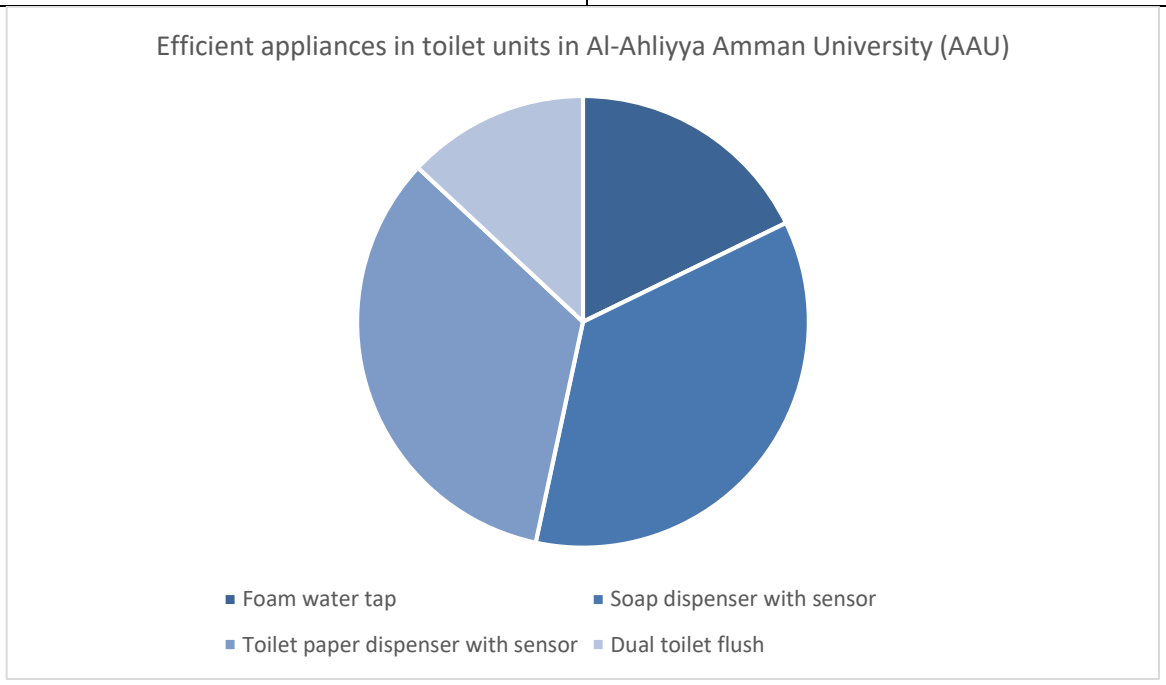
Soap dispenser with sensor

Foam water tap



Breakdown of efficient appliances in toilet units in Al-Ahliyya Amman University (AAU)

Description:

Al-Ahliyya Amman University campus consists of 21 permanent buildings (including academic activities facilities, student residence, and services) and 9 temporary structures (including caravans, kiosks, and shelters). These include about 350 toilet units, water efficient appliances are applied in these units. Examples of such appliances are foam water taps, soap dispenser with sensor, toilet paper

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dispenser with sensor and dual toilet flushes. The table below illustrates the total number of appliances, number and percentage of efficient appliances in toilet units.

Achievements:
More than 60% of water appliances are efficient.

Appliance	Total Number	Total number Efficient appliances	Percentage
Toilet	350		**%**
Water tap	500	Foam water tap = 230	45%
Soap dispenser	350	Soap dispenser with sensor = 315	90%
Toilet paper dispenser	350	Toilet paper dispenser with sensor = 298	85%
Toilet flush	454	Dual toilet flush = 150	33%
		Total Percentage	**62%**

[5] TRANSPORTATION

[5.1] Shuttle Services

Example of Shuttle Services

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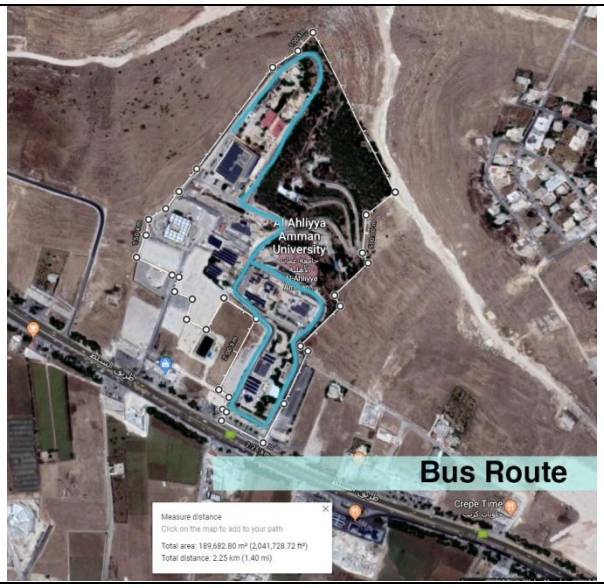


Bus – Route

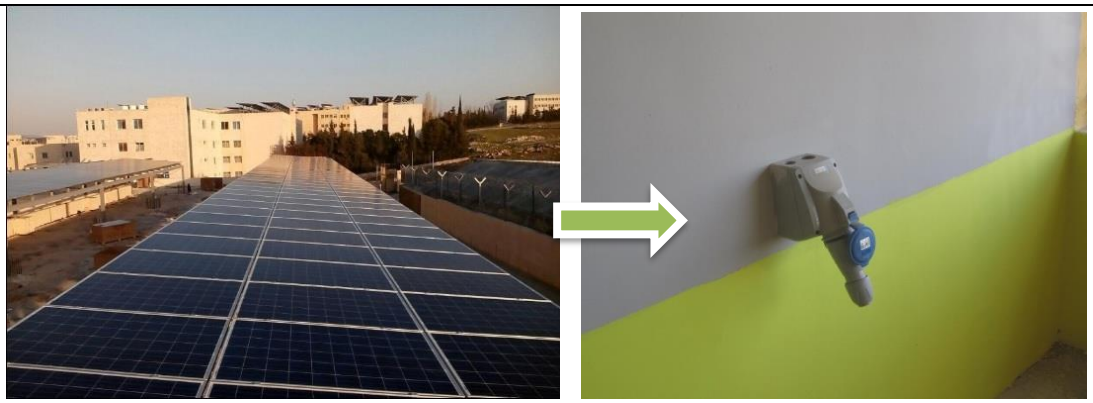
Description:

Despite the availability of public transport from all cities to the AAU of public buses and taxis. However, the university provides free transportation services using two buses only for both students and staff. These buses are modern, equipped and safe. . The capacity of these buses is 25 passengers for each one of them. The two buses travel within a route inside the campus every 30 minutes from 8:30 am to 2:30 pm all week days.

Total number of shuttle buses: 2

Total number of journeys for each shuttle bus: 12 journeys

[5.2] Zero Emission Vehicles (ZEV) Policy on Campus



Example of free charging points for EV from photovoltaic panels on parking rooftop

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Example of Electric / Hybrid vehicles used by students

Description:

In order to minimize the impact of carbon dioxide emissions in the atmosphere, PV Cells supply electricity to electric car chargers for student and staff vehicles in designated parking areas. This encourages environmentally friendly and energy-saving transportation. Electricity charging for vehicles is free of charge.

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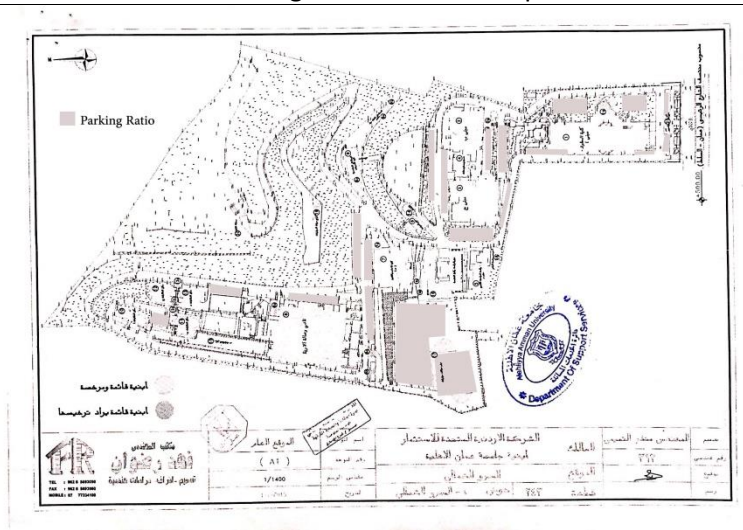
[5.3] Ratio of Parking Area to Total Campus Area

Ratio of Parking Area to Total Campus Area



Ratio of Parking Area to Total Campus Area

Description:
Total main campus area: 100,004 m^2
Total parking area = 8750 m^2 (700 spaces*12.5m^2 per space).
Ratio = 0.087

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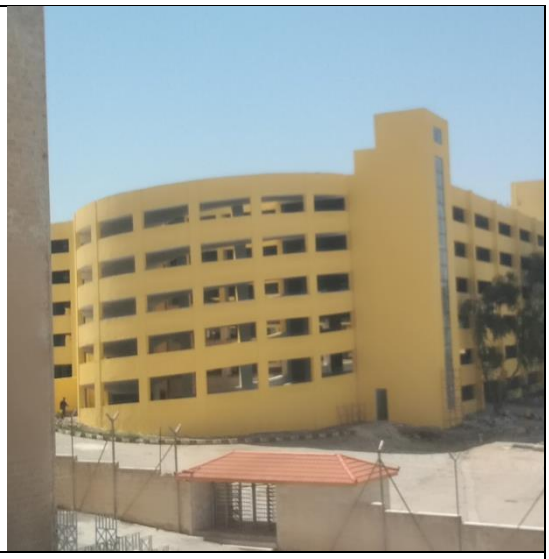
[5.4] Number of Transportation Initiatives to Decrease Private Vehicles on Campus

	
Campus Bus	Multi-story parking building.
	
Smart gates that allow only cars with smart stickers (staff only) to access the campus	Smart car sticker (for staff)

Description:

1. bus service for students transportation
2. Multi-story parking building to minimize parking space footprint.
3. Staff vehicles are provided with smart stickers that the university's car barrier reads. This prohibits students' cars from entering the campus. Instead students with cars should park their vehicles in the designated areas for student parking which are located around campus.

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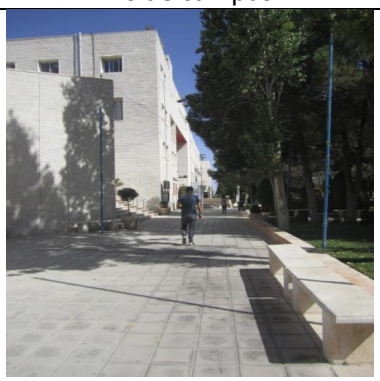
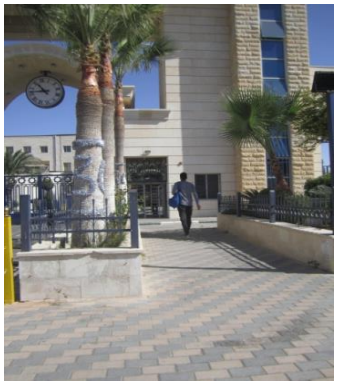
[5.5] Pedestrian Path Policy on Campus

Map for disabled pedestrian circulation inside campus

Safe pedestrian paths inside campus





Safe pedestrian paths inside campus

Special parking the disabled

Ramps for the disabled

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Description:
Separator is located between vehicle and pedestrian paths.
Design elements for the physical disabled students and staff.

[6] EDUCATION AND RESEARCH

[6.1] Number of Courses/Subjects Related to Sustainability Offered

University selective courses

No	Course title	Description
1	Environmental and Public Safety	The concept of the environment, its laws and relation to other sciences, primary and secondary components, cycle of elements in the natural environment, environmental problems, pollution of the environment, the problem of the depletion of environmental resources, principles of public health and diseases: the concept of pu  blic health, pathogens, viruses, bacteria, parasites, fungi, insects. The environment and pathology: organic, genetic, reproductive and psychological pathology. Nutrition and public health: types of food, malnutrition diseases, undesirable eating habits. The environment and public health from an Islamic perspective: Quranic verses and sayings of the Prophet.

Faculty of engineering

No	Course title	Description
		Civil Engineering
2	Transportation Engineering	Introduction to transport and transportation engineering; types passenger and freight transportation; transportation systems and elements)highway, railway, airport and harbors); design criteria for transportation systems; traffic flow theory and queuing theory; introduction to capacity analysis and quality of service; logistic in transportation; transportation environmental impact; introduction to transportation planning.
3	Environmental and Sanitary Engineering	Definitions of the environmental engineering concepts; Pollution sources and types; Pollution prevention; Air pollution, sources and causes; Principles of water chemistry and Microbiology; Design of water distribution systems; Drinking water treatment; Wastewater characteristics and treatment. Contemporary issues.
4	Treatment of Liquid and Solid Wastes	Wastewater conveyance systems; Design of sewers; Wastewater management; Advanced wastewater treatment and reuse; Sources, types, and composition of solid wastes; sanitary landfills; landfill techniques for domestic, industrial, and hazardous wastes; landfill rehabilitation. Contemporary issues.
5	Public Transportation Engineering	Role of public transportation; urban public passenger modes; transport network types; methods of estimating public transportation demand; public transport facility capacity and quality of service; network and route planning and design; terminal design.
6	Pavement Maintenance and Rehabilitation	Introduction to pavement maintenance management process; pavement networks definitions and classifications; pavement distress evaluation and rating procedure; Pavement testing types (destructive and nondestructive tests); pavement condition

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		forecasting; overview of maintenance and rehabilitation techniques; network level management; project level management; computer applications in pavement maintenance and rehabilitation.
7	Water Resources	Hydrologic and hydraulic design concepts for water resources systems; Functions and design of hydraulic structures; Storm water systems design; Groundwater occurrences and Darcy's law; Equations of groundwater flow; Well hydraulics; Flow in confined and unconfined aquifers; Engineering economy concepts in planning and management of water resources systems; Computer applications in water resources; Contemporary issues.
8	Irrigation, Drainage, and Dam Engineering	Sources of irrigation water; Long term storage; Design of dams and reservoirs; Design of irrigation structures and drainage canals; Design of culverts and measurement structures; Contemporary issues
		Electronics & Communications Engineering
9	Power & Power Electronics Lab.	This course teaches how to work with high voltage power elements and power electronics components.
		Electrical Engineering
10	Design of Lighting and Electrical Installations	Residential and Commercial building wiring: blueprint reading, branch circuit and feeder installations, service entrance installations; Lighting: Illumination basic concepts, parameters and units, types and characteristics of lamps and luminaries, Indoor lighting design and public road lighting design; Low-voltage installations with TT earthing system of panels and boards; Single line diagram electrical safety; Special electrical installations: Fire alarm systems, Closed-Circuit Television.
11	Design of Lighting and Electrical Installations Lab.	Identify structural equipment; Training on domestic and industrial installations; Fault detection; safety systems and electrical protection installations; phone system for the entrances of buildings combinations; Fire alarm systems; Closed-Circuit Television; Lighting design and evaluation of lighting devices combinations.
12	Renewable Energy Systems	Conventional and renewable energy sources; Possible approaches for conversion of sunlight into electricity; Statistics on world installations of renewable energy systems and costs; Environmental considerations; Wind turbines (WTs) and Wind characteristics: Types of WTs, Power in the wind, Impact of tower height, Maximum rotor efficiency, Average power in the wind; WT generators: Review of induction generators, Fixed- and Variable-speed WTs, Types of Control systems, Typical wind generation configurations, Estimates of produced electrical energy, WT power curve, WT economics, Environmental impacts of WTs; Solar radiation: Properties of light, Solar Radiation in Space and the Earth's Surface, Solar angles, solar radiation measurements, calculation of average monthly insolation on a tilted surface, Peak Sun Hours; Physics and electrical characteristics of solar PV Cells: Basic semiconductor physics, Equivalent circuit for a solar cell, The I–V curve under STC, Bypass diodes and blocking diodes, Types of PV cells; Grid-connected PV systems: Principal components, Configurations of inverters and PV arrays, Interfacing with the Utility, DC and AC rated power, STC efficiency of PV module or array, Estimating PV energy production, PV System sizing (Design), PV System economics; Computer applications to all studied topics using Matlab.
13	Distributed Generation and Smart Grids	Traditional and new concepts of power systems; Possible benefits and drawbacks of Distributed Generation; DG definitions; Types of DG; Interface with the grid; Point of common coupling (PCC); Hosting capacity of DG; Impact of DG on power flow: Steady state voltage rise, Voltage profile for multi-bus radial feeder, Methods for steady state voltage regulation, Estimation of hosting capacity, Evaluation criteria, Power losses; DG impact on hosting grid under fault conditions: DG impact on balanced fault levels, DG impact on unbalanced fault levels, Behaviour of DGs under fault conditions; Power Quality in presence of DG: Long duration voltage variation, Short duration voltage variation, Harmonics, Harmonic producers, Individual and total harmonic Distortion, Effect of harmonics on power system components; DG and Smart Grids: Definitions, Structure, Advantages, Smart grids worldwide, Microgrids, Smart grids and information technology; Computer applications to all studied topics using Matlab. Prerequisite: 0875318 Renewable Energy Systems.

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Intelligent Transportation System (ITS) Master Program Course		
14	Fundamentals of ITS	This course will provide the basic knowledge regarding the definition of ITS, function, impacts, benefits and challenges, ITS architecture, the historical development of ITS from policy and market economic perspectives. Also, it will cover the different applications of ITS and Advanced Traffic Management and Traveller Information, vehicle location and route navigation and guidance concepts, traffic and incident management, planning and human factor issues for ITS. The course will also cover ITS and road safety in addition to environmental issues related to ITS.
15	Road Traffic Flow and Control	This course will cover the topics of traffic flow theory, mathematical modelling of traffic, deterministic and probabilistic relations, queuing theory, arrival analysis, traffic delay models, traffic stream shockwaves, gap acceptance models, traffic signals, traffic control measures, traffic signal timing plans.
16	Traffic Modelling and Simulation	This course will provide students with the basics of transportation modelling and simulation. It will cover theory for car-following, lane-changing, speed adaptation, Microscopic, Mesoscopic and Macroscopic traffic simulation approaches, the mathematical simulation framework, Network Supply Models, computer simulation techniques, O-D estimation, cell transmission models. It will also cover on-line simulation and simulation based optimization, calibration and validation of traffic simulation models, and the applications of traffic simulation models.
17	ITS Architecture and Standards	This course will cover the topics of introduction to Intelligent Transportation Systems (ITS), architecture and standards for selected ITS subsystems, such as a connected vehicle, automated driving, and security.
18	Analytical Techniques in Transportation Engineering	This course will cover the topics of introduction to transportation systems analysis, experimental design, analysis of variance, probability models, regression analysis, representation of transportation problems, discrete choice analysis.
19	(Advanced) Transportation Planning	This course will cover the topics of fundamentals of transport systems, introduction to transportation planning, transportation planning and decision making, characteristics of urban travel, data availability and travel surveys, travel demand analysis, introduction to traffic flow theory and simulation approaches, introduction to transportation network models, prediction of origin to destination flows, users' response to ITS and applications for real-time systems. In addition, this course will address the topics of transport policy and multi-modal transport studies, intermodal integration planning, accessibility and mobility planning.
20	Communication Systems in ITS	This course will provide a summary of the components and functions of automotive sensors and mobile communications systems. It will cover an overview of RADAR sensor technology, radio channel modelling, smart antenna, medium access control, routing protocol, data dissemination, handover, security, mesh networking, road traffic estimation, and location-based services.
21	GIS Applications in ITS	This course will provide the required background related to the geographic information technology and the application of geo-informatics in transportation engineering. It will cover the topics of basic concepts of GIS, RS, GPS, and land-use and transportation data, Cartography, Coordinate & Reference systems, map generation and analysis, transportation network development and algorithms, in addition to transportation models and their applications in GIS.
22	Traffic Safety	This course will cover the following topics in detail; accident definition and types, accident cost, factors affecting road accidents, roadway safety appraisal techniques, road safety measures, accident data collection, roadway design standards, traffic education, and law enforcement, before and after studies.

Faculty of Law

No	Course title	Description
23	Environmental law	This course focuses on : fundamental objective which is to study the preservation laws of the environment , as the physical environment in which human live, including water, air and space, soil and living organisms , and various industrial facilities established to satisfy human needs ; And in this course we examine the legal rules established by the legislator

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		to prevent any human behaviour that would endanger public health as a result of pollution of the environment surrounding citizens , such as factory waste and trespassing on agricultural land or causing to be less produced in addition to reducing noise pollution or cutting forests and trees ; This course shows the opinion of Islamic law from environmental pollution , and environmental laws in Jordan with the study of regulations and instructions issued there under ; The course presents the liability , aiming to protect all different kinds of environment from pollution.

Faculty of architecture and design

No	Course title	Description
		Architecture
24	Environmental Control	Theoretical: The integral relationship between architecture and its surrounding environment, the considerations that must be taken into account for climate adaptation, thermal performance of buildings, the principles of thermal transitions, the thermal comfort inside architectural spaces and how to control sun radiation and its impact on buildings and their thermal comfort, environmental considerations of sustainability on the macro to micro scale focusing on low energy consumption architecture: zero net, strategies of passive building design, knowing the renewable energy resources, modelling simulation building concepts. Practical: An application project for design principles with low consumption of energy.
25	Landscape Architecture	Theoretical: The study of the elements and principles of coordination of sites; studying the coordinate systems of the sites; studying the plant species and forestation used in Jordan and its suitability and effectiveness for the proposed site, the urban furniture and the gardens. Practical : Research and analysis of different site design projects; selection of sites within the urban environment in Jordan, study of location and climate and its impact on the nature of the selection of elements of the site (trees and plants, site furniture, water bodies), specifying the function and activities of the project, presenting exercises and design projects.
26	Lighting & Acoustics	Theoretical: The main theoretical and applied principles of lighting and acoustics for architectural designed spaces, the technical aspects of natural and industrial lighting, their technical and architectural effects, the requirements of visual comfort, how to calculate the lighting required in interior and exterior architectural design spaces, and the selection of lighting units and their specifications, As well as study the most important design considerations for the vocal aspects, and study sound effects in some spaces of special use such as museums and theatres.
27	Sustainable and Green Architecture	Theoretical: A comprehensive introduction to the history of sustainable architecture, its techniques and applications in the various elements of the built environment; Design strategies, environmental and social methods to be considered for the sustainability of sites and buildings; International and local applications of sustainable design methodology; Expansion of energy modelling and simulation systems for buildings. Practical: An application project for the principles of sustainability at the level of building or urban content, using building modelling and simulation programs.
28	Advanced Building Technology	Theoretical: New building materials; Modern building systems, construction technology for metal structures, wood structures; Advanced concrete structures, precast or prefabricated construction, and the role of the engineering sector and other sectors in developing new building materials.
		Interior Design
29	Technology of Materials	PROPERTIES AND SPECIFICATIONS: Standards & Metrology Organizations, Natural Properties, Mechanical Properties, and Loads.

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30	Lighting and Acoustics in Design	The physics of light: The Spectrum of Light, Daylight, Artificial Light, A Brief History of Architectural Lighting, Light Qualities & Features: Quantity of Light, Diffuse Light & Directed Light, Modelling, Brilliance, Glare, Luminous Colour & Colour Rendering, Terms & Units.
31	Behavioural sciences and environmental design	The Nature of Behavioural Sciences, The Nature of Environmental Design, Behavioural Sciences Problems & Concerns, Concepts of Praxis in Environmental Design, The Legacy of Modern Movement.
32	Environmental & Administrative Interior Design	Fundamentals of Interior design in administrative and office spaces, Emphasis on basic design, functional and expressional requirements, Office and/or Administrative Design project from initial client conference through final presentation, Professional presentation techniques, codes, symbols, energy conservation and problem solving are applied with an emphasis on design creativity.
33	Plants and Gardens in Interior Design	THE TYPICAL RESIDENTIAL SITE: Houses & Homes, Architectural Character; Outdoor Rooms, Outdoor Space; GARDENS HISTORY & MAJOR DESIGN STYLE: Formal, Cottage, Mediterranean Gardens, Modernist, Japanese, Foliage, Fusion, Productive, Family Gardens, Sustainable, Urban Gardens, Country Gardens, Concept Gardens.

Description:

A list of the courses title and description with embedded sustainability principles offered by Al-Ahliyaa Amman University is outlined in the previous tables. The Curriculum description is according to national Jordanian accreditation system. The courses include a selective university course in addition to compulsory and selective faculty and department courses.

Total number of courses with sustainability embedded for courses running in (2018/2019)**: 33 course**

[6.2] Total number of Courses/ Subjects Offered

The total number of courses offered in Al-Ahliyya Amman University in (2018/2019) = **1154 course**

[6.3] Total Research Funds Dedicated to Sustainability Research (in US Dollars)

Total research funds dedicated to sustainability research in 2016/2017=$122,200

Total research funds dedicated to sustainability research in 2017/2018=$120,300

Total research funds dedicated to sustainability research in 2018/2019= $155,400

The averaged annum last 3 years of research fund dedicated to sustainability research = $ 132,633

[6.4] Total Research Funds (in US Dollars)

Total research fund 2016/2017 =$ 1,400,000

Total research fund 2017/2018 =$ 1,400,000

Total research fund 2018/2019 =$ 1,400,000

[6.5] Number of Events Related to Sustainability

A total average of events related to sustainability hosted or organized by Al-Ahliyaa Amman University for the last three academic years: **18 events /year**

هاتف: ٠٥/٣٥٠٠٢١١/٢١٧ – فاكس: ٠٦/٥٣٣٦١٠٤ – مكتب بريد جامعة عمان الأهلية، الرمز البريدي ١٩٣٢٨ (عمان–الأردن)
Telephone: 05/3500211/217 - Fax: 06/5336104 - Al-Ahliyya Amman University - Post Office - Zip code 19328 (Amman-Jordan)

(2018/2019): 27

Number	Date	Event
1	15 -7- 2019	Al-Hourani Group Supports and Participates in A Conference Titled “Promoting the Touristic Product in Jordan”
2	15 -7 -2019	The AAU Consultation & Continuing Education Centre Holds A Workshop on the Revit Construction Program & Building Information Modelling Technology
3	21 -7- 2019	AAU Participates in A Training Workshop for Business Incubators in Jordanian Universities
4	7-7-2019	The AAU Dean of Scientific Research participates in the 4th International Conference of Arab Impact Factor
5	30-4-2019	A Voluntary Activity for Planting Trees
6	28-4-2019	The AAU Faculty of Architecture & Design Invites Dr. Wasim Gaby to Deliver A Lecture
7	22 – 4- 2019	The AAU Faculty of Law Holds Its Second Scientific Conference Titled “The Legal Aspects that Attract Investment & Sustain development”
8	7 – 4- 2019	AAU Ranks 301 in the World According to the “Times” Global University Ranking of 2019
9	2-4-2019	AAU Students of The Department of Architecture Participate in A Workshop Titled “Parametric Architecture: Approach & Product”
10	1 - 4 -2019	Dr. T. Jay Rosandach Visits the AAU Business Incubator
11	16-4-2019	The AAU President, Prof. Sari Hamdan, Inaugurates A Distinguished Forum for Scientific Research at the University
12	26-3-2019	The AAU School of Business Hosts A Lecture Titled “Electronic Payment and Digital Currency”
13	21 – 3- 2019	On the Mother's Day Occasion, AAU Holds A Bazaar for Productive Mothers in Al-Balqa Governorate
14	21-3-2019	AAU Faculties Conclude the Scientific Week Activities at the University
15	18-3-2019	The AAU Students of the Architecture Department Participate in the Scientific Workshop Titled “Parametric Architecture/ Method & Outcome”
16	14-3-2019	The AAU Faculty of Engineering Organizes A Workshop on Nanotechnology
17	3-2-2019	AAU Participates in A Dialogue Session of HOPES Project Titled “Higher Education & the Syrian Crisis”
18	30 – 1- 2019	AAU Distributes “Food Packages and Blankets” through its Winter Campaign in Al-Aghwar Areas
19	29 – 1- 2019	AAU Participates in the Times Higher Education Summit “The Emerging Economies Summit 2019” Held in Qatar
20	24 – 1- 2019	AAU Organizes A Winter Campaign to Help the Chaste Families in the Area of "Um Jouza" in Al-Salt City
21	13-12-2018	The AAU Department of Civil Engineering Organizes A Workshop Titled “Assessment of Some International Practices to Improve Road Safety "
22	5 – 12- 2018	AAU Participates Distinctively in the Exhibition of “Oman Higher Education, Training & Human Resources Development
23	29 - 11 -2018	The AAU Department of Graphic Design Organizes the “Olive Picking” Activity
24	22 – 11- 2018	AAU Hosts the Heritage Caravan
25	19-11-2018	AAU Holds An Honouring Ceremony for Students of the Department of Architecture Engineering for their Distinguished Projects
26	7 – 11- 2018	The AAU Council Recommends Holding A "Restoration" Course in Cooperation with the Municipality of Al-Salt Administered by Specialists (7/11/2018)
27	5 – 11- 2018	AAU Launches the University Smart Card for Students and Professors in Cooperation with the Jordan Kuwait Bank and the Management of Dinark Company

(2017/2018): 14

Number	Date	Event
1	7 - 8 -2018	AAU Students Succeed in Their Campaign Under the Slogan “Mishwarak Hisaboh Alina”
2	9 – 7- 2018	A Cooperation Agreement between the AAU and the Russian State University of Physical Education, Sport, Youth and Tourism

هاتف: ٠٥/٣٥٠٠٢١١/٢١٧ – فاكس: ٠٦/٥٣٣٦١٠٤ – مكتب بريد جامعة عمان الأهلية، الرمز البريدي ١٩٣٢٨ (عمان–الأردن)
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3	8 - 7 -2018	The International Youth Organization for Environment and Development in Cooperation with the University of Jordan and Al-Ahliyya Amman University Launch the "7th Arab Scientific Conference for Giftedness and Talented"
4	16 - 5 -2018	AAU Organizes the Day of Community Participation
5	23 - 4 -2018	AAU Launches "We pay for your Journey" Campaign.
6	22-4-2018	AAU Organizes Academic Faculties Week
7	5 - 4 -2018	AAU Students Meet with Two Parliamentary Committees: the Women and Family Affairs Committee & the Energy and Mineral Resources Committee
8	31 -1- 2018	Discussing Ways of Cooperation between AAU and Fuheis Municipality
9	28 - 1 -2018	Discussing Ways of Cooperation between AAU and Ministry of Public Works and Housing
10	18 – 1- 2018	AAU Organizes Winter Campaigns
11	18 – 12- 2017	The AAU Carries out the Annual Winter Campaign
12	11-12-2017	An Environmental Day in the AAU
13	23 – 10- 2017	The AAU Participates in the Initiative of Planting the “Um Zaytoonah” Park
14	11 - 9 -2017	The AAU Signs An Agreement with the Royal Jordanian Company for Tourism and Travel

(2016/2017): 12

Number	Date	Event
1	7-8-2017	The AAU Signs An Agreement With the Design Zone Company
2	10-5-2017	The AAU Dean of the Faculty of Architecture and Design Inaugurates Students’ Projects Exhibition
3	8-5-2017	A Lecture Titled “Paper and Electronic Libraries in the AAU”
4	1 - 5 -2017	The AAU Organizes a Campaign for Blood Donation and Another One for Clothing and Gifts to the Needy Children Prior to the Advent of Ramadan
5	25 - 4 -2017	The AAU Organizes Al-Dahia Marathon under the Slogan “No For Smoking”
6	24-4-2017	The AAU Holds an Informative Lecture on the Sustainable Green Architecture
7	20-4-2017	Holding a Scientific Lecture in the AAU Titled “Rainmaking (Artificial Precipitation) in Jordan: Prospects and Aspirations)
8	13 - 3 -2017	In the Framework of Cooperation with Local Community Institutions, Al-Ahliyya Amman University and KNAUF Company Signed a Memorandum of Understanding
9	23-3-2017	A Lecture on (Revit) Program
10	26 - 3 -2017	Renewing Cooperation between Al-Ahliyya Amman University and the Pioneers Academy for Training
11	8 - 3 -2017	Al-Ahliyya Amman University Celebrates the Tree Festival
12	20 -10 -2016	Starting Preparations for the Exhibition and the Bazaar of the Communities

هاتف: ٠٥/٣٥٠٠٢١١/٢١٧ – فاكس: ٠٦/٥٣٣٦١٠٤ – مكتب بريد جامعة عمان الأهلية، الرمز البريدي ١٩٣٢٨ (عمان–الأردن)
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Events related to Sustainability in Al-Ahliyaa Amman University

هاتف: ٠٥/٣٥٠٠٢١١/٢١٧ – فاكس: ٠٦/٥٣٣٦١٠٤ – مكتب بريد جامعة عمان الأهلية، الرمز البريدي ١٩٣٢٨ (عمان–الأردن)
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