



جامعة الإمام عبد الرحمن بن فيصل

IMAM ABDULRAHMAN BIN FAISAL UNIVERSITY

عمادة خدمة المجتمع والتنمية المستدامة

Deanship of Community Service and Sustainable Development



SDG 6.3.4

Water-Conscious  
Building Standards-  
Minimize Water Use

2024-2025

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## 1. Quantifying the Water Consumption at IAU



**Water meter to regularly check the total volume of water used**

## 2. Wastewater / Organic Analysis Lab at IAU

### Wastewater/Organic Analysis Lab

**Supervisors**

**Dr. Ismail Anil**  
**Email:** ianil@iau.edu.sa  
**Location:** College of Engineering, A13 Building

**Equipment/Service**

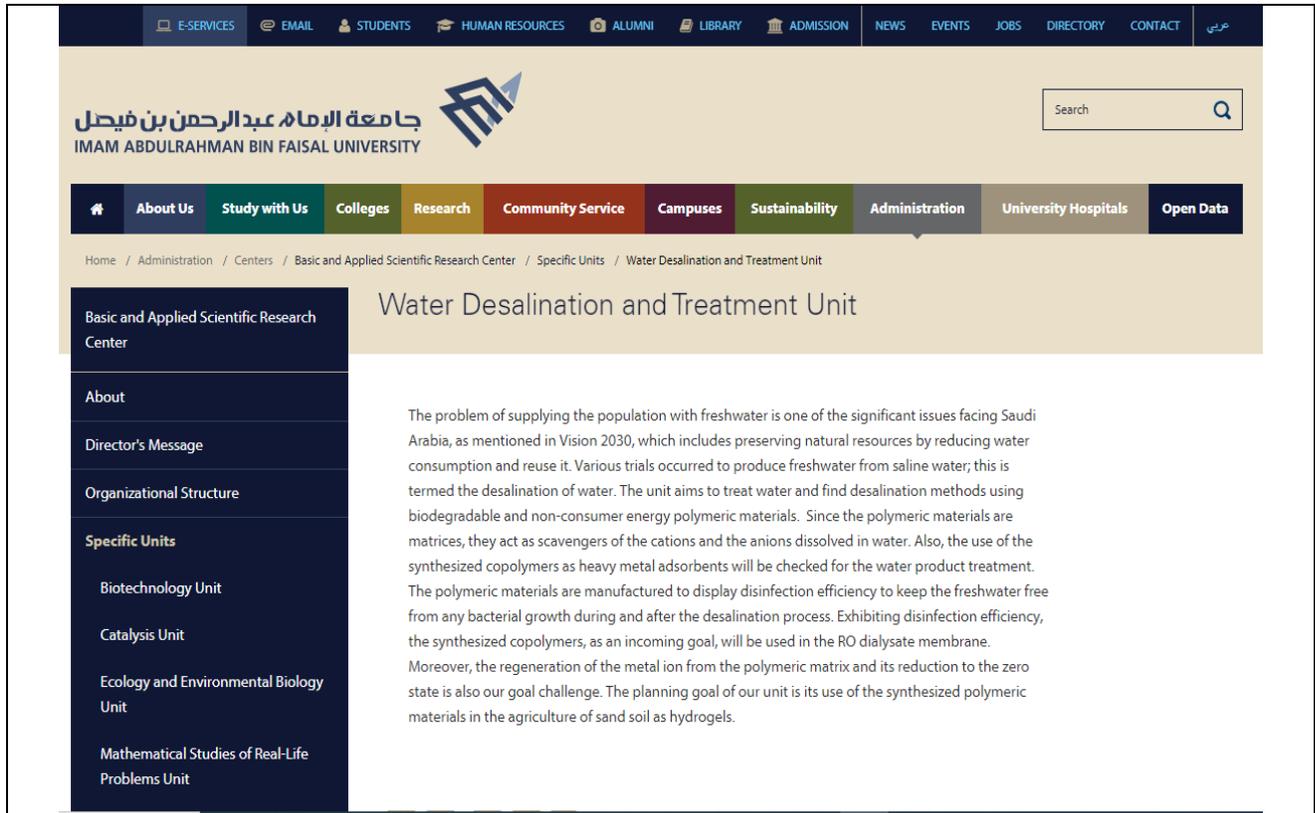
- Gas chromatography coupled with mass spectrometry (GC-MS)
- Ion chromatography
- High-performance liquid chromatography (HPLC)
- Radioactivity Meter
- Solid phase extraction system
- Furnace
- Rotary evaporator
- Automatic titration unit

Laboratory Analysis & Environmental Services Price List

**Wastewater / Organic Analysis Lab at IAU**

<https://www.iau.edu.sa/en/colleges/college-of-engineering/labs-and-equipment/environmental-engineering-laboratories>

### 3. Water Desalination and Treatment Unit



Home / Administration / Centers / Basic and Applied Scientific Research Center / Specific Units / Water Desalination and Treatment Unit

#### Water Desalination and Treatment Unit

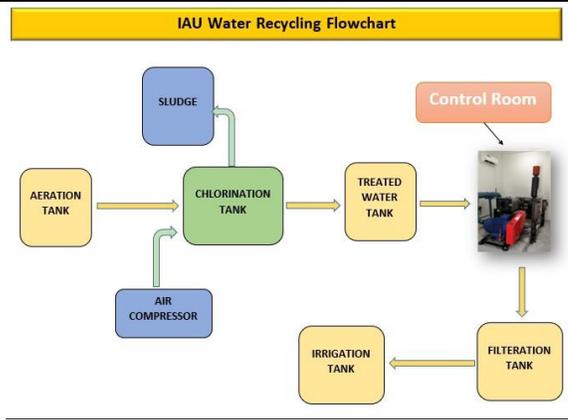
The problem of supplying the population with freshwater is one of the significant issues facing Saudi Arabia, as mentioned in Vision 2030, which includes preserving natural resources by reducing water consumption and reuse it. Various trials occurred to produce freshwater from saline water; this is termed the desalination of water. The unit aims to treat water and find desalination methods using biodegradable and non-consumer energy polymeric materials. Since the polymeric materials are matrices, they act as scavengers of the cations and the anions dissolved in water. Also, the use of the synthesized copolymers as heavy metal adsorbents will be checked for the water product treatment. The polymeric materials are manufactured to display disinfection efficiency to keep the freshwater free from any bacterial growth during and after the desalination process. Exhibiting disinfection efficiency, the synthesized copolymers, as an incoming goal, will be used in the RO dialysate membrane. Moreover, the regeneration of the metal ion from the polymeric matrix and its reduction to the zero state is also our goal challenge. The planning goal of our unit is its use of the synthesized polymeric materials in the agriculture of sand soil as hydrogels.

#### Water Desalination and Treatment Unit

The problem of supplying the population with freshwater is one of the significant issues facing Saudi Arabia, as mentioned in Vision 2030, which includes preserving natural resources by reducing water consumption and reuse it. Various trials occurred to produce freshwater from saline water; this is termed the desalination of water. The unit aims to treat water and find desalination methods using biodegradable and non-consumer energy polymeric materials.

<https://www.iau.edu.sa/en/administration/centers/basic-and-applied-scientific-research-center/specific-units/water-desalination-and-treatment-unit>

## 4. Biological water treatment plant at IAU

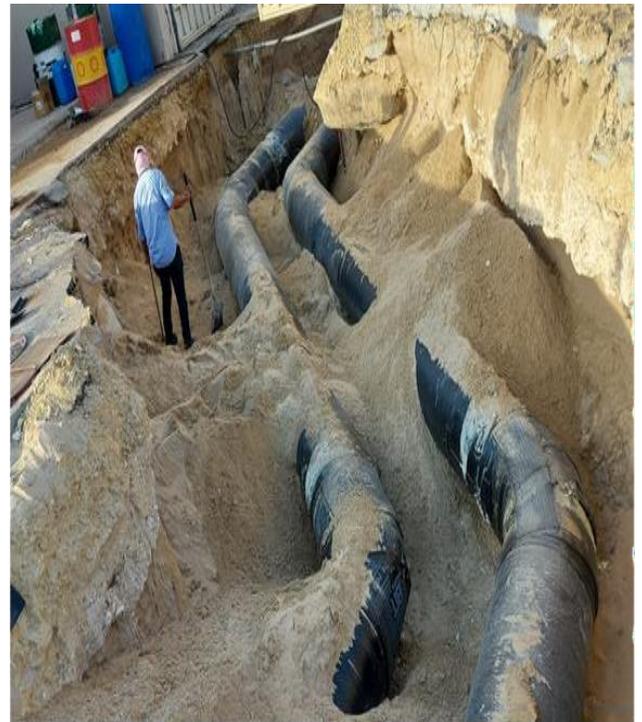
	 <pre>graph LR; A[AERATION TANK] --&gt; C[CHLORINATION TANK]; S[SLUDGE] --&gt; C; AC[AIR COMPRESSOR] --&gt; C; C --&gt; TW[TREATED WATER TANK]; TW --&gt; CR[Control Room]; CR --&gt; F[FILTRATION TANK]; F --&gt; I[IRRIGATION TANK];</pre>
<p><b>On campus biological water treatment plant at IAU</b></p>	<p><b>Water Recycling Flow Chart in IAU</b></p>
<p><b>Water Recycling Program (IAU, KSA)</b></p>	

## 5. Water recycling tanks in Google maps



Water recycling tanks in Google maps

## 6. Periodic Inspection

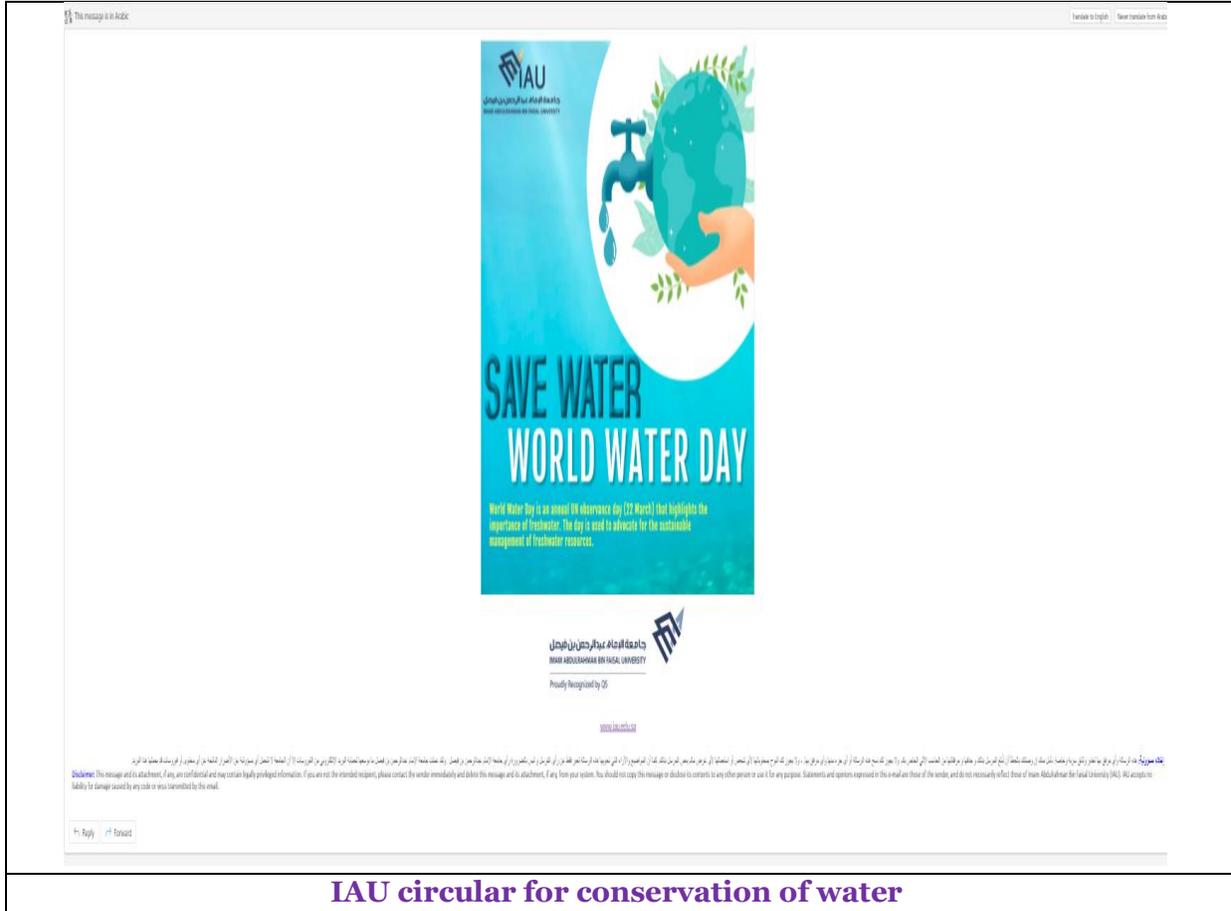


**Water Pipes periodically inspected and repaired for any leaks or worn outs**



**Monitoring Water pipes regularly for preventing leakages and water pollution**

## 7. Creating Awareness among IAU Staff and Students to save Water



## 8. Displaying “Save Water” Slogan in IAU Washrooms and Cafeterias



Displaying “Save Water” slogan in IAU Cafeterias and washrooms

## 9. Water Conservation Program Implementation at IAU



**Brakish water well Reverse osmosis desalination, IAU, KSA**



**Water recycling at full swing in IAU Campuses**





Wastewater collection and processing plant



Waste water treatment plant at IAU

## 10. Rainwater Harvest at IAU



**Place for Rainwater Harvest at IAU, KSA**



**Place for Rainwater Harvest at IAU, KSA**

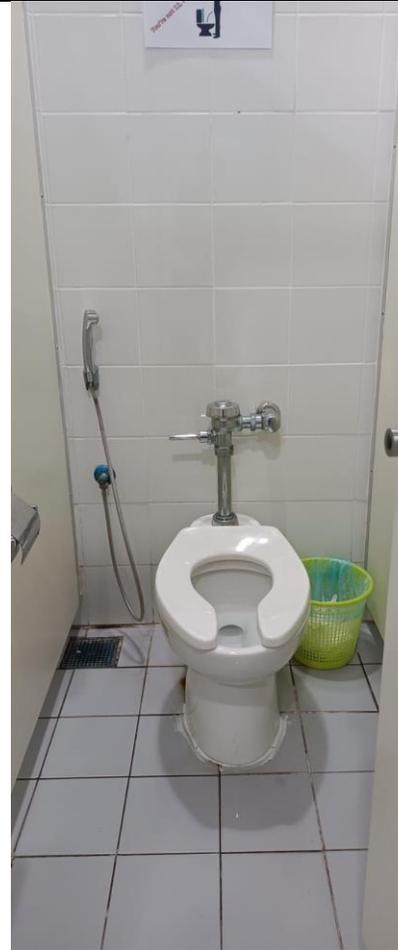
## 11. Various ways of Treated Water Consumption at IAU



**Consumption of Treated Water in Water Dispensers at IAU**



**Treated water consumption at dispensers installed in every college building**



**Treated water is consumed in all Washrooms across IAU**



**Recycled water is utilized for Irrigation and for garden sprinkler system**



**Laying down irrigation pipelines to treated water for conservation of the Grass fields and plants**



**Use of the Sprinkler system to reuse water and nourish Grass fields and plants with water**



**Use of treated water to nourish Grass fields and plants with water**

## 12. Periodic Inspection and Repair of Water Pipes at IAU



**Water Pipes periodically inspected and repaired for any leaks or worn outs**



**Monitoring Water pipes regularly for preventing leakages and water pollution**

## 13. Saudi water authority – Water Research Community



Imam Abdulrahman bin Faisal University (IAU) Participation in the fifth edition of the Water Research Community Initiative organized by the Saudi Water Authority.

We are proud of the participation of the Mechanical and Energy Engineering Department in the fifth edition of the **Water Research Community Initiative** organized by the Saudi Water Authority, through the presentation of two research papers and the participation of the department head, Dr. Mosaed Al-Zahrani, as a speaker in one of the dialogue sessions.

[https://x.com/CE\\_IAU\\_SA/status/1968561503134437880](https://x.com/CE_IAU_SA/status/1968561503134437880)

## 14. IAU Active Participation in Water Conservation Program



### IAU Participation in the Middle East Water Week Conference and Exhibition

The Environmental Engineering section of Faculty of Engineering Imam Abdulrahman Bin Faisal University participated in the Middle East Water Week Conference and Exhibition and presented a number of projects aimed at treating water.

[https://twitter.com/CE\\_IAU\\_SA/status/1736717131863962024](https://twitter.com/CE_IAU_SA/status/1736717131863962024)

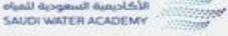




### **Visit of the Delegation of the Saline Water Conversion Corporation to IAU**

Part of the visit of the delegation of the Saline Water Conversion Corporation to Imam Abdulrahman Bin Faisal University, which included a tour of: 1) Research Center, Faculty of Science, 2) Faculty of Computer Science and Information Technology, 3) Faculty of Engineering  
[https://twitter.com/IAU\\_KSA/status/1604581022351368192](https://twitter.com/IAU_KSA/status/1604581022351368192)





جامعة الإمام عبد الرحمن بن فيصل  
 IMAM ABDURRAHMAN BIN FAISAL UNIVERSITY  
 مركز التعليم المستمر  
 Continuing Education Center

## برنامج أجيال الصيفي

يسر مركز التعليم المستمر بجامعة الإمام عبد الرحمن بن فيصل وبالتعاون  
الأكاديمية السعودية للمياه عن إطلاق برنامج أجيال الصيفي

### الأنشطة التدريبية

البرمجة باستخدام روبوت كويكو

قياس الرقم الهيدروجيني في السائل

تحدي القيادة باستخدام الليجو

روبوت اسفيرو وملعب كرة القدم

بطارية الليثيوم من باسكو

الواقع الافتراضي وللعزز

الليجو






للتسجيل  
وللمعلومات



موقع  
التدريب

جامعة الإمام عبد الرحمن  
بن فيصل - مركز التعليم  
المستمر - 679

سعر  
البرنامج

350 ريال  
للتأهل مسجولة

الفئة  
الاستهدفة

لأطفال من  
7 - 12 سنوات

موقع  
البرنامج

14 يوليو 2024  
9:00AM - 12:00PM  
15 ساعة تدريبية



الهيئة السعودية للمياه  
Saudi Water Authority

SAUDIWACD

WWW.SWACADEMY.COM

### IAU in cooperation with the Saudi Water Academy for “Generations Summer Program” for Children

The Continuing Education Center is pleased to #Imam\_AbdulRahman\_Bin\_Faisal\_University In cooperation with the Saudi Water Academy. The announcement of the launch of “Generations Summer Program”. The Target group is Children from (7 years to 12 years).

[https://twitter.com/IAU\\_KSA/status/1808112744589070344](https://twitter.com/IAU_KSA/status/1808112744589070344)

