University : Al-Mustaqbal University (formerly name: Al-Mustaqbal University College)

Country : Iraq

Web Address : https://uomus.edu.iq/Home/Index

6.3.3 Free drinking water provided, Year: 2025: Provide free drinking water for students, staff and/or visitors (e.g. drinking water fountains).

Link to the public evidence:
https://sustainability.uomus.edu.iq/SDG_Hub/Goals/6

1. Drinking water supply and conservation

Al-Mustaqbal University is committed to providing safe, high-quality drinking water free of charge to students, staff, and visitors across its campus. To support this commitment, the university installed a Reverse Osmosis (RO) water treatment station in 2023, with an initial production capacity of 10 m^3/h. **During 2025, the station was upgraded to achieve a peak production capacity of 13.5 m^3/h, representing a 35% increase in its original capacity**. This enhancement enables the university to meet increased drinking water demand during peak consumption periods while supporting specific laboratory requirements (Figure 1).

The treatment system comprises a preliminary sedimentation tank, a dual-media sand–anthracite filter, an activated carbon filter, an ion-exchange treatment unit, four RO membrane cartridges, and a final ozonation unit.

Throughout 2025, the RO station remained operational, with additional auxiliary units introduced to enhance treatment efficiency and water quality. An ultraviolet (UV) disinfection unit was integrated alongside the existing ozonation system to provide an additional barrier against microbial contamination. UV treatment inactivates pathogenic microorganisms, including bacteria, viruses, and protozoa, without introducing chemicals or affecting the taste and odor of the treated water.

The university also conducts regular water quality monitoring to assess the suitability of the produced water for drinking purposes. The results of these assessments are presented in Table 1.

These initiatives demonstrate Al-Mustaqbal University's continued commitment to ensuring access to safe and free drinking water, promoting public health, and supporting Sustainable Development Goal 6 (Clean Water and Sanitation).

Public Evidence: https://sustainability.uomus.edu.iq/SDG_Hub/Goals/6

Table 1: Typical Quality Parameters of RO-Produced Potable Water at Al-Mustaqbal University

Parameter	Unit	Typical Value	Standard Limit*	Notes
pH	–	6.8 – 7.3	6.5 – 8.5	Within acceptable range
Turbidity	NTU	Nill	< 1.0	Meets clarity standards
Total Dissolved Solids (TDS)	mg/L	70 – 200	< 5, 00	High purity level
Total Hardness	mg/L as $CaCO_3$	< 75	< 500	Soft water
Sulfate (SO_4^{2-})	mg/L	< 40	< 250	
Nitrate (NO_3^-)	mg/L	< 30	< 50	Safe level
Calcium (Ca^{2+})	mg/L	< 15	< 200	
Magnesium (Mg^{2+})	mg/L	< 10	< 150	
Chloride (Cl^-)	mg/L	< 50	< 250	Low chloride content
Sodium (Na^+)	mg/L	< 40	< 200	
Iron (Fe)	mg/L	< 0.1	< 0.3	
Manganese (Mn)	mg/L	< 0.05	< 0.1	

Fluoride (F^-)	mg/L	< 0.7	0.7 – 1.5	Within guideline
Microbial parameters (Total Coliform count)	MPN/100 mL	Not detected	Not detected	Meets microbial safety

*Standard limits are based on Iraqi lageslation and WHO drinking water guidelines.



Figure 1: Photos of Reverse Osmosis treatment unit of Al-Mustaqbal University

To optimize access to clean drinking water and minimize water losses, Al-Mustaqbal University has installed efficient water supply refrigerators across its campus. These units are strategically designed to ensure convenient access for students, faculty, staff, and visitors. The university also provides complimentary drinking water to all employees and guests, reducing the need for disposable plastic bottles.

In addition, free drinking water glasses are regularly made available in department lobbies, further promoting sustainable water consumption practices. During examination periods, especially in the warmer months, chilled water bottles are systematically distributed to students, invigilators, and faculty members, ensuring hydration and comfort throughout the process. Figure 2 is several photos taken for the drinking water dispensers across the campus.



Figure 2: Efficient Refrigerators used for storing free-water for drinking purposes

Furthermore, Figure 3 illustrates the average monthly consumption of RO water throughout 2025. This water fulfills a range of essential needs, including drinking, cooking, and sanitation. *As we mentioned previously, during the month of July, final exams were held for the specializations included in the Bologna educational system, and accordingly, water consumption increased slightly during the relatively hot month*.

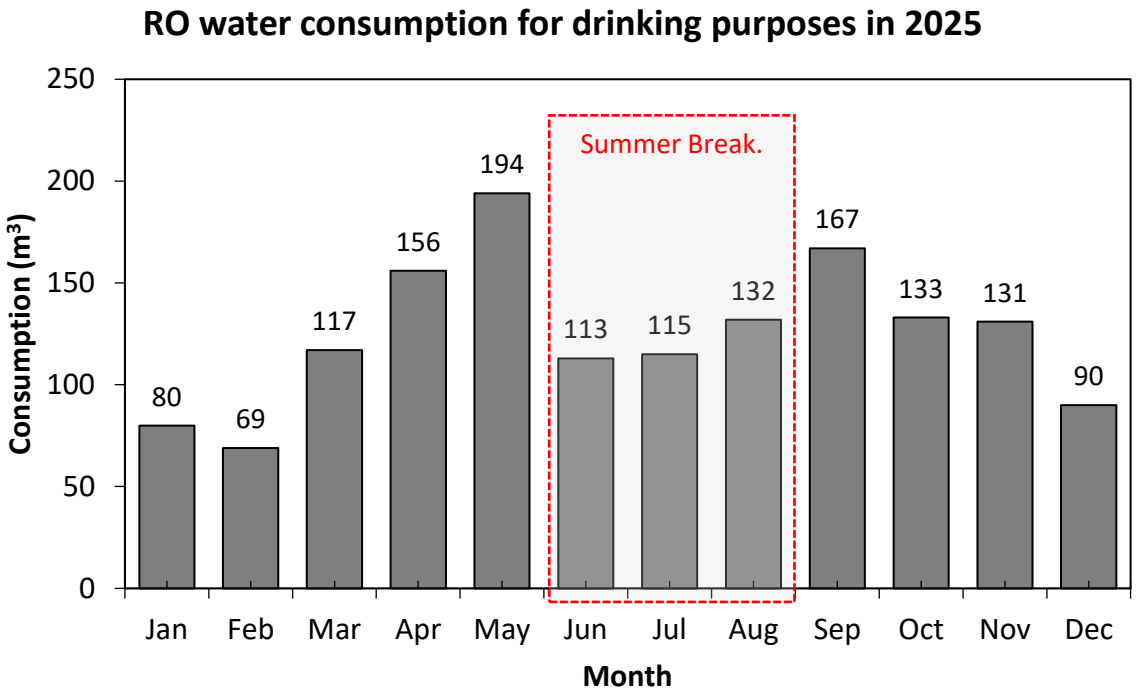


Figure 3. The average RO water consumption per month of year 2025. Although a significant number of students are not attending and only a limited number of staff are present in summer break, the data shows a continued decline in water consumption, even under high-temperature conditions. This reflects the effectiveness of the measures taken to manage water resources.

As part of its commitment to ensuring the well-being and comfort of students and staff, Al-Mustaqbal University has established a comprehensive approach to support them during examination periods. Understanding the importance of proper hydration, particularly in high-stress environments that demand intense focus, the university has implemented a thoughtful strategy. During exams, the university proactively provides refreshments to all participants, including students, invigilators, examination committees, and esteemed faculty members who have contributed to the students' learning journey.

To promote optimal cognitive function and maintain hydration levels, the university ensures the systematic distribution of water bottles. These bottles are essential not only for the students facing exams but also for the dedicated individuals overseeing and managing the process.

Moreover, the university goes the extra mile by providing pleasantly cool water, especially during the sweltering summer days. This attention to detail reflects Al-Mustaqbal University's deep commitment to the comfort and well-being of its community, demonstrating a keen awareness of the physical demands placed on all involved in the examination process, particularly in challenging weather conditions.



Figure 4: A photo illustrating the free distribution of water to students during exams.