



جامعة الشارقة
UNIVERSITY OF SHARJAH

Sustainability Office

University of Sharjah

Annual report 2019

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According to the UAE national agenda and the UAE Vision 2021, more effort should be spent to ensure sustainable development while preserving the environment, and to achieve a perfect balance between economic and social development. At the University of Sharjah (UOS), we are convinced that the university has a significant role and responsibility to tackle these challenges and develop sustainable solutions for the benefit of our society.

To support the role of the university towards sustainability, the sustainability office was formed in October 2017, with its vision for “the University of Sharjah becomes a leading regional and global benchmark for sustainability excellence in higher education.”

1.1 Mission of Sustainability Office

The sustainability office missions are to enhance sustainability awareness and introduce the sustainability culture to the students, staff and faculty members as well as to the local community. In addition, it will endeavor to make sustainability integrated through undergraduate and graduate courses, specialized sustainability training and public seminars. The sustainability office will adopt the most relevant sustainable practices and outline proactive measures to preserve natural resources in university campus. The campus will become as a laboratory for sustainability excellence and an avenue to transfer successful sustainability stories to the local community. In addition, the sustainability office will collaborate with national and international organizations for achieving sustainability excellence goals.

1.2 Goals of Sustainability Office

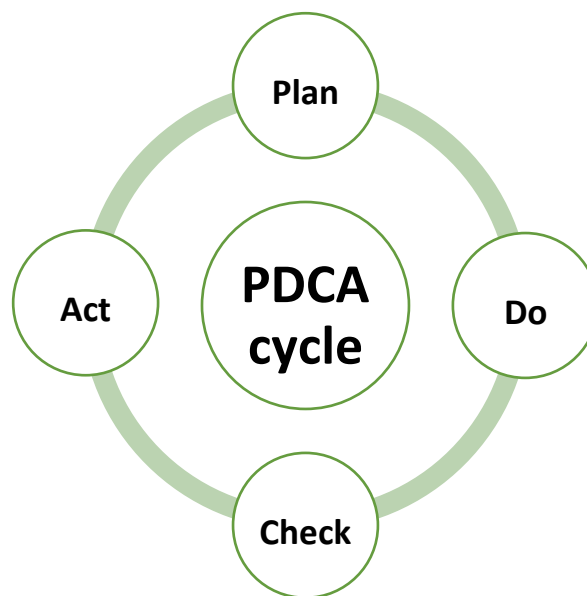
1. Oversee sustainability-related aspects in the University.
2. Embedding sustainability into the culture and traditions of the University community.
3. Continuously initiating projects and practices that integrate sustainability into the University life and activities.
4. Continuously measuring the sustainability performance of the University.
5. Monitor the implementation of sustainability solutions in the University main campus.
6. Review and continuously improving solutions towards sustainability.
7. Be the hub for sustainability-related information and activities.
8. Publish annual reports about the achievements of University of Sharjah towards sustainability.
9. Spread public awareness regarding sustainability issues of the University of Sharjah.

One of the main elements of the strategic plan 2019 - 2023 is to ensure campus sustainability by establishing a financially sustainable institution with diverse sources of income, managing resources to establish a sustainable financial base, examining the distribution of resources across programs, enhance the concept of environmentally sustainable campus, and revise cost-ineffective academic programs.

To achieve the sustainability office vision, mission, goals and the strategic plan 2019-2023, the sustainability office has decided to establish the sustainability circles in order to achieve sustainability in various fields, and to make the University of Sharjah a sustainable campus by ensuring sustainability in the various tracks such as agriculture, food and dining,

1.3 Methodology

The Sustainability Office endeavors to develop a culture of sustainability, by reducing the environmental impact and incorporating sustainability in every aspect of UOS campus life and operations. These efforts can seek "incremental" improvements over time or "breakthrough" improvement all at once. This will be accomplished by implementing the continuous improvement methodology - the plan - do - check - act (PDCA) cycle:



PLAN: Identify an opportunity and plan for change.

DO: Implement the change on a small scale.

CHECK: Use data to analyse the results of the change and determine whether it made a difference.

ACT: If the change was successful, implement it on a wider scale and continuously assess the results.

2. Climate Emergency Letter

The University of Sharjah joined Higher Education Institutions across the globe by signing a Climate Emergency Letter and agreed to undertake a three-point plan through the work with students.

The three-point plan includes:

1. Committing to going carbon neutral by 2050 at the very latest.
2. Mobilizing more resources for action oriented climate change research and skills creation.
3. Increasing the delivery of environmental and sustainability education across curricula, campus and community outreach programs.

3. UI Green Metric

The University of Sharjah was ranked first in the country for the second consecutive year by the "Green Metric International Ranking" in sustainable development and committing to clean energy standards. It also advanced 3 places in the Arab world and 54 places internationally, to occupy the 398th position, as shown in *Figure 1*.



Figure 1: Green Metric ranking for year 2018.

The Green Metric World University Ranking is a university ranking platform established by the University of Indonesia in 2010. This ranking aims to evaluate and rank universities all over the world according to their current condition and policies related to green campus and sustainability activities. It measures the sustainability in six aspects which are setting and infrastructure, energy and climate change, transportation, waste, water and education.

Figure 2 and *Figure 3* provide the results of Green Metric in 2018 and compare it with the results of 2017.

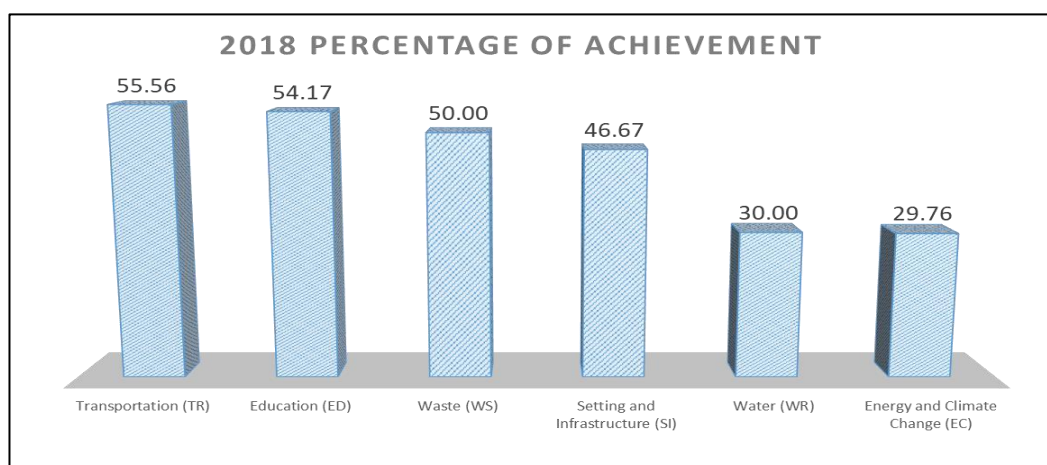


Figure 2: Results of Green Metric for year 2018.

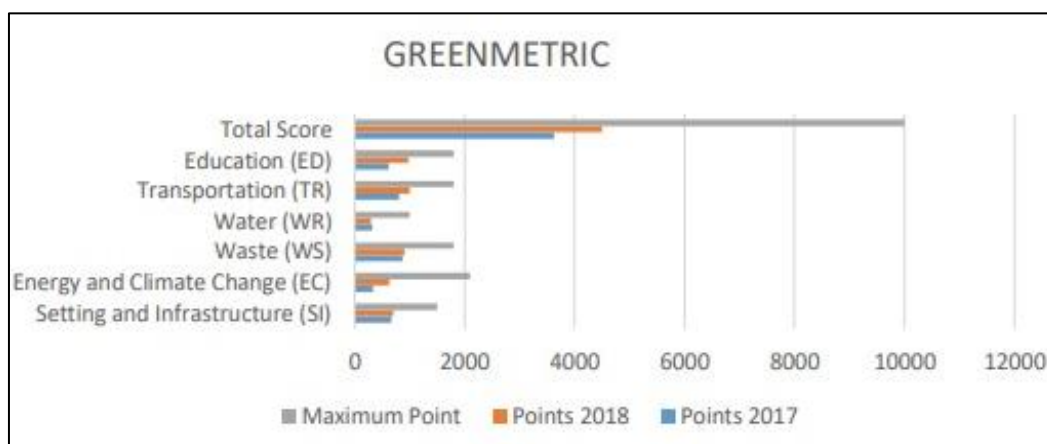


Figure 3: Improvement of Green Metric Results.

Moreover, the Sustainability Office participated in “The National Workshop on UI Green Metric World University Rankings and World Sustainable Campus Tour” in Moscow, and signed the declaration of membership of UI Green Metric Network.

4. AASHE AND STARS

The University of Sharjah is a member of the Association for Advancement of Sustainability in Higher Education (AASHE) since March 2018.

We will apply for the Sustainability Tracking, Assessment & Rating System (STARS) that measures the sustainability performance of colleges and universities.

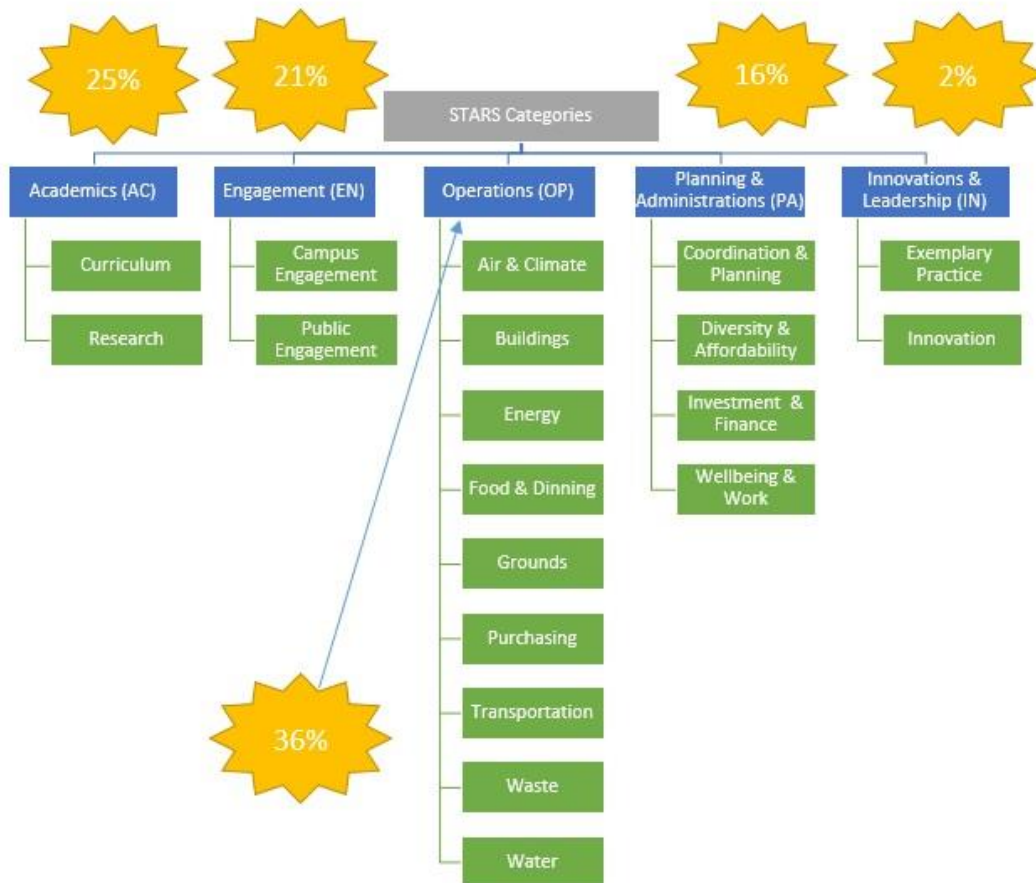


Figure 4: STARS Categories.

5. Sustainability Office Circles

A Sustainability Circle indicates that a group of volunteering members who have interests in a sustainability-related track will meet regularly to identify, analyze, and suggest initiatives or solutions to sustainability-related issues on campus. The group is usually led by a sustainability track leader (List of circle leaders is included in Appendix A).

The Sustainability Office has established 20 Sustainability Circles. Each of these Sustainability Circles is associated with a specific sustainable field, and has its own goals, Key of Performance Indicators (KPIs), achievement and initiatives. The Sustainability Circles cover the following tracks:

- Agriculture
- Community Partnership
- Purchasing
- Landscape and Building Management
- Transportation
- Sustainability Studies
- Continuous Improvement and Sustainability Excellence
- Workplace Health, Safety, and Wellbeing
- Energy and Climate Change
- Water Resources Management
- Waste Management
- Sustainability Curriculum
- Building Operations and Maintenance
- Water Science and Technology
- Food and Dining
- Awareness
- Animal Welfare
- People of Determination
- Female-Students Sustainability Activities
- Sustainable Garden

5.1 Sustainability Circles Goals

The sustainability circles aim at achieving the following goals:

1. To achieve the vision of the sustainability office in making UOS a regional and global benchmark for sustainability excellence in higher education.
2. To raise the awareness of sustainability at UOS.
3. To develop a culture of sustainability, by reducing the environmental impact and incorporating sustainable solutions in campus life and operations in all aspects.
4. To implement sustainability solutions in UOS.

6. Sustainability Circles Goals, Achievements, and Initiatives

Currently, each sustainability circle has set goals, Key of Performance Indicators (KPIs), initiatives, and has brought about some achievements. These are empowered with photos and evidence.

6.1 Agriculture Sustainability Circle



Leader: Prof. Ali Al-keblawy
Applied Biology Department
College of Sciences.

A landscape of a particular environment is what distinguishes it from other environments. This is why establishing an Agriculture Sustainability Circle is considered to be of major importance to the university, as UOS is well known for its green landscapes and planted vegetation, as shown in *Figure 5* and *Figure 6*. In particular, the university will benefit in two ways. Firstly, it will develop aesthetically through its plantation of native plants, and design of gardens, parks and streets. Secondly, it will develop educationally because it will provide students with the opportunity of having a hands-on experience through which they will apply what they have studied in theory.

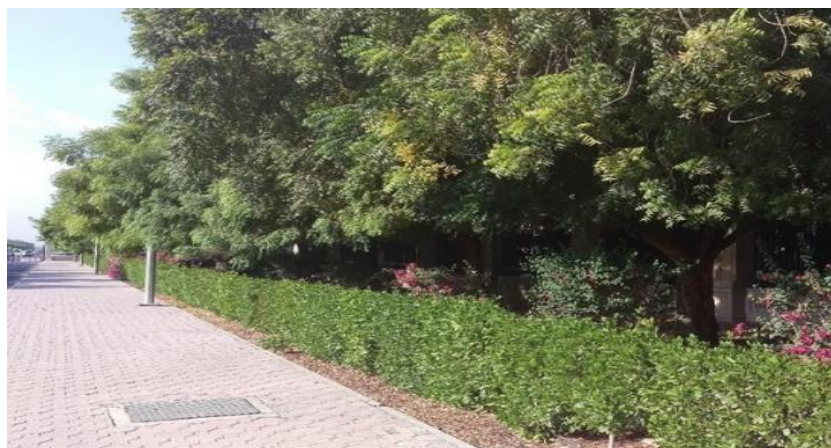


Figure 5: Vegetation in UOS.



Figure 6: Palm tree area in UOS.

Goals

1. Grow native plants under the botanical garden conditions for an educational purpose.
2. Use the native plants for landscaping some parts of the UOS campus.
3. The ultimate goal is to convince the Agriculture Sector of the University of Sharjah and the Agricultural Department in Sharjah Municipality to adopt native plants in landscaping Sharjah City.

KPIs

1. Acceptance of public to have native plants in landscaping.
2. Acceptance of construction companies and municipalities for using native plants in landscaping.
3. Use of the students for the native plants in their senior projects.

Current Projects and Achievements

1. Native plants are currently growing under the nursery of Fine Arts College. Seeds from around 15 species were sown and are well established now. These plants comprise trees, large shrubs, small shrubs and herbs. They include also some medicinal and non-medicinal plants with cultural significance.

New Initiatives

1. Students studying landscape design in Department of Architecture and Fine arts will use the plants in designing gardens, parks and streets.
2. Faculty from Biotechnology and Architecture will carry research together on certain kinds of plants that have the potential to be adopted in landscaping.

6.2 Community Partnership Sustainability Circle



Leader: Dr. Faker Al Gharaibeh

Sociology Department

College of Arts, Humanities and Social Sciences.

Like the Sustainability Studies Circle, the goal of the Community Partnership Sustainability Circle is to educate individuals on the various aspects of sustainable development. This is implemented through spreading awareness, participating in voluntary events and parenting socialization. As the name suggests, the Community Partnership Sustainability Circle encourages the meeting of faculty members from different organizations to discuss means to carry out sustainability with minimum expenditure and other effective decisions with respect to managing the budget.

Goals

1. Educating people about areas of sustainable development.
2. Spreading awareness on culture of consumption behavior.
3. Conducting voluntary activities in the areas of sustainable development.
4. Supporting people to plan for safe family environments and decreasing social violence.
5. Enhancing environment safety and ensuring that university is friendly to social groups (elderly, disabled, women, Children, etc.)
6. Activating the idea of social responsibility by fostering cooperation between public organizations, and other sectors.

KPIs

1. Student Education Program.
2. Inter-Campus Collaboration.
3. Continuing Education.
4. Community Service.
5. Participation in Public Policy.
6. Trademark Licensing

Current Projects and Achievements

1. Starting the awareness program for the Community Partnership Sustainability Circle by giving a presentation about the Social Sustainability in the Sustainability 2020 Inauguration, as shown in *Figure 7*.



Figure 7: Social sustainability presentation in the Sustainability 2020 Inauguration.

2. Creative Graduation Projects Workshops at Sharjah University on Saturday, 28-9-2019. I would like to point out that the initiative's work is not limited to the main workshop. Students will be contacted directly later to inform them of all opportunities within the support, guidance and opportunities of graduation projects.
3. Meeting with representatives of the National Advanced Skills Program: A meeting of the Department of Social Sustainability was held with representatives of the National Skills Program meeting with representatives of the National Advanced Skills Program to disseminate and enhance future skills. The aim was to enable community members to learn about the details of the program and learn about future skills, and then their development in support of the principle of lifelong learning, as this initiative comes as part of the "My Skills" campaign12x12. One of the important skills is financial skills and home spending:

The Financial Information Skills Workshop teaches participants practices that touch the lives of all members of the community and the family such as knowing the nature of income, expenses, profit, loss, currency value, savings, and how to prepare effective financial balances and the economy that qualifies individuals for success in entrepreneurship.

4. Volunteer Hour Initiatives: The Department of Social Sustainability coordinated a visit to the Nursing Home to train students in the skills of the "Volunteer Hour" initiative in Sharjah in September 2019.

New Initiatives

Peaceful Community and Happy Family

- This initiative aims to spread the best ways of parenting socialization without abuse.
- Domestic abuse (often called 'family violence') can include physical, verbal, sexual or emotional abuse.
- Protect the children and teenagers from bullying and abuse, and encourage them to do a useful activity.

Voluntary Hour

- Training volunteers on volunteering skills through a training workshop.
- Identifying places and areas of volunteering in the university and community (disabled, elderly and students themselves).
- Volunteering is only for one-hour weekly.

Be wise

- How to rationalize (reduce) consumption in water and electricity at the university.

Budget Management

- Many people do not realize that they spend more than they earn and slowly sink deeper into debt every year. This initiative aims to create a spending plan for your money to ensure that you will always have enough money for the things you need.

6.3 Purchasing Sustainability Circle



Leader: Dr. Mohamed Gamal.
Management Department
College of Business Administration

Despite the call over saving money, the Purchasing Sustainability Circle encourages the purchase of items as long as it adds value to the sustainability process. In other words, the items purchased should be free of toxicity, are environmentally friendly, and are fit for reuse. The items are not restricted to electronic gadgets, but they also cover food products and beverages. To ensure the contribution of students, staff and faculty members to the Purchasing Sustainability Circle, they should all have a unified vision with regard to the type of products to be purchased, as well as be allowed to share convenient, yet sustainable, suggestions.

Goals

1. Purchasing non-hazardous materials such as non-toxic cleaning products, thereby promoting healthy work, living, and learning spaces.
2. Purchasing recycled and environmentally certified materials such as recycled-content and third party certified office paper by supporting markets for environmentally preferable paper.
3. Purchasing eco-efficient and low waste products that have less impact on health and environmental resources (e.g., energy and material consumption), particularly electronic products such as desktop computers, laptops, tablets/slates, televisions, mobile phones, and imaging equipment (copiers, digital duplicators, facsimile machines, mailing machines, multifunction devices, and printers and scanners).
4. Purchasing eco-labeled or green-stickers products that identify environmentally proven products with less environmental footprint such as consumed resources and amount of pollution created.

5. Purchasing safe and secured food and beverage products that support sustainable food systems, by prioritizing the purchase of plant-based and sustainably or ethically produced food and beverage items. These actions reduce the social and environmental impacts of food production and help foster food security, improved conditions for farm workers, healthier soils and waterways.
6. Green collaboration with partners such as sharing knowledge and training.

KPIs

1. Percentage of environmentally certified materials.
2. Percentage of eco-labeled or green-stickers products.
3. Percentage of rejected or returned items due to environmental issues.
4. Percentage of recycled or reused materials.
5. Percentage of environmentally collaborative suppliers (e.g., sharing knowledge and training).

Current Projects and Achievements

1. UOS started purchasing energy efficient computers, laptops, LED lights as well as other equipment and energy efficient appliances *Figure 8*.



Figure 8: Energy – Efficient refrigerators used in UOS.

6.4 Landscape and Building Management Sustainability Circle



Leader: Dr. Emad S. Mushtaha.
Architectural Engineering Department
College of Engineering.

This Sustainability Circle acknowledges the importance of sustaining the indoor and outdoor environment of the university in addition to the importance of the sustainable master plans. Consequently, it preserves the indoor environment by ensuring that the university buildings operate in a manner that minimizes the consumption of resources. Whereas, it preserves the outdoor environment by maintaining a healthy and safe environment, that fulfills the needs of campus users. Besides, it directs its attention to the improvement of the aesthetic scenery of the university environment.

Goals

1. Manage the grounds sustainably by integrating economic, social, and ecological dimensions to meet users' needs, protect wildlife habitat, conserve resources, and maintain healthy ecosystems.
2. Design, maintain, and manage all hard and soft services in ways that provide a safe, livable and healthy indoor environment while simultaneously mitigating the impacts of buildings on the outdoor environment.
3. Incorporate environmental features into the design and planning of the campus to reach at producing a sustainable master plan that considers all practices of sustainability.

KPIs

1. Building Design and Construction:

- Incorporating environmental features in design and construction projects.
- Sustainable decisions in the Design phase for enhanced indoor environmental quality, safe, healthy, and productive spaces for the campus community.

2. Landscape management:

- Campus Wide Sustainable management of the grounds.

3. Sustainability planning:

- Campus master plan and physical campus plan for current and new buildings, moving towards sustainability.

4. Student Life on Campus:

- Integrating Campus culture and building management and its spaces by providing interactive design decisions, to promote the engagement of student by integrating sustainability into their daily live on campus.

Current Projects and Achievements

1. Landscape Design of Sustainable Farm for the UOS.
2. Barrier-Free and Sustainable Master plan for UOS campus.
3. Sustainable Courtyard at College of Fine Arts and Design as shown in *Figure 9*.

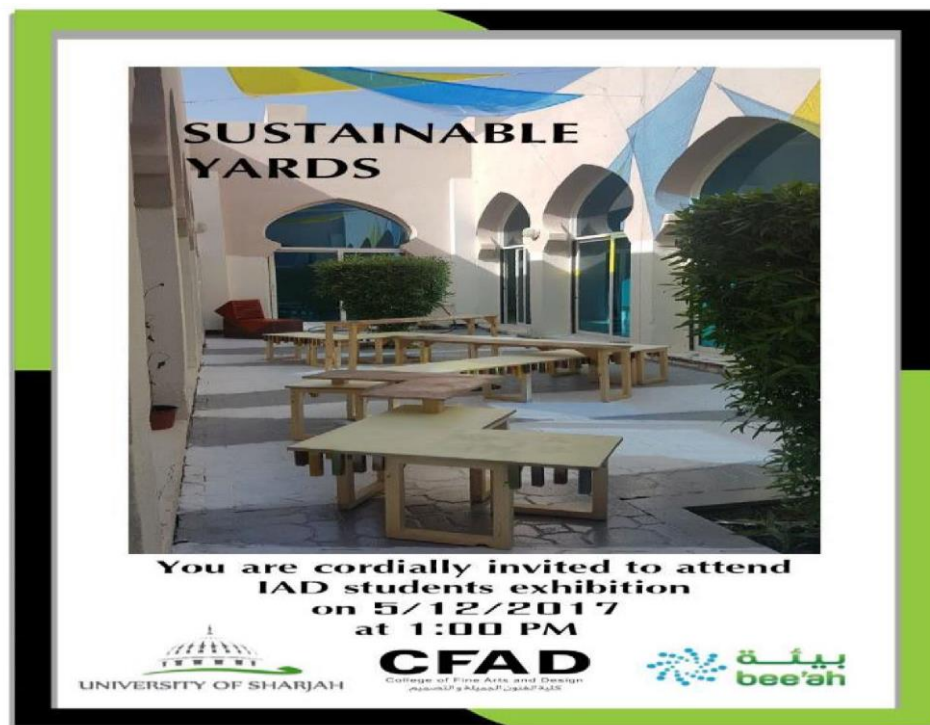


Figure 9: Sustainable Yards Project.

4. Interior Design of Institute of Leadership in Higher Education, as seen in *Figure 10*.



Figure 10: Meeting to discuss a proposal of the leadership institute in M3 building.

New Initiatives

1. Waste Management and Segregation Campaign, Total cost of AED 33.000
2. Sustainable Courtyards for UOS campus, Total cost of AED 6000 for (15*5) sq. m
3. Project of access and comprehensive design for persons with disabilities. Total cost of AED 200.000

6.5 Transportation Sustainability Circle



Leader: Dr. Khaled Hamad.

Civil Engineering and Environment Department

College of Engineering

Transportation is a crucial requirement and the mostly used facility by every individual on campus, be it a student, employee, worker or visitor. Therefore, this Sustainability Circle attempts to minimize the negative impacts resulting from the continuous use of transportation, such as pollution and traffic jam. Furthermore, the Transportation Sustainability Circle encourages campus users to use more sustainable modes of transportation to promote a better and healthier lifestyle.

Goals

The transportation sustainability circle aims to:

1. Move towards sustainable transportation systems:

Since transportation is a major source of greenhouse gas emissions and other pollutants that contribute to health problems, using more sustainable modes of transportation helps reducing air pollution, traffic congestion, and GHG emissions.

2. Promote the overall health and wellbeing of the campus community by encouraging and facilitating cycling and walking, where UOS has bicycle racks distributed around the campus, as shown in *Figure 11*.



Figure 11: Example of bicycle racks at UOS.

3. Achieve cost savings and to support local economies by reducing the use of petroleum-based fuels for transportation.
4. Support carpooling to travel to and from the university:
Carpooling will reduce the number of vehicles entering the campus, which will reduce the air pollution and the GHG emissions on campus.

Current Projects and Achievements

- Various transportation services are provided for UOS community; the transportation service map is shown in *Figure 12*.



Figure 12: University shuttle map.

1. Transportation services for students having training off-campus.
2. Transportation services from and to Sharjah and Dubai international airports exclusively to the UOS dormitory students.
3. Weekly shopping services for the UOS dormitory students to different shopping centers (according to a dormitory-prepared schedule).
4. Emergency transportation for the UOS dormitory students to hospitals and outpatient clinics (as instructed by the dormitory management).
5. In-campus transportation available from 7:00 am to 5:00 pm (from the dormitory to the medical college, college of fine arts and design, and among UOS main campus buildings), as shown in *Figure 13*.



Figure 13: UOS shuttle services.

6. Transportation for staff and faculty members to attend conferences and official visits.
7. Transportation services for new faculty members to complete their transactions.
8. Transportation services to Sharjah and Ajman for staff members.

Zero Emission Vehicles:

UOS owns 45 zero emission vehicles that are available, provided and charged by UOS and powered by both electricity and solar energy, as shown in *Figure 14* and *Figure 15*.



Figure 14: Vehicle powered by Solar Energy in UOS.



Figure 15: Examples of Zero Emissions Electric Vehicles in UOS.

New Initiatives

Encourage car-sharing in campus:

To reduce the number of cars entering the campus and to encourage car-sharing principle among university population, UOS will provide dedicated car parking spaces for those who are practicing car sharing to encourage them.

First and last mile mobility:

The sustainability office is currently studying the ION Bee'h proposal, which includes the following:

- Electric car sharing for students and faculty members that can be accessible through a smart application, as shown in *Figure 16*.
- Introducing electric scooter & bicycles, as shown in *Figure 18* and *Figure 17*.



Figure 16: Electric cars accessible through smart application.

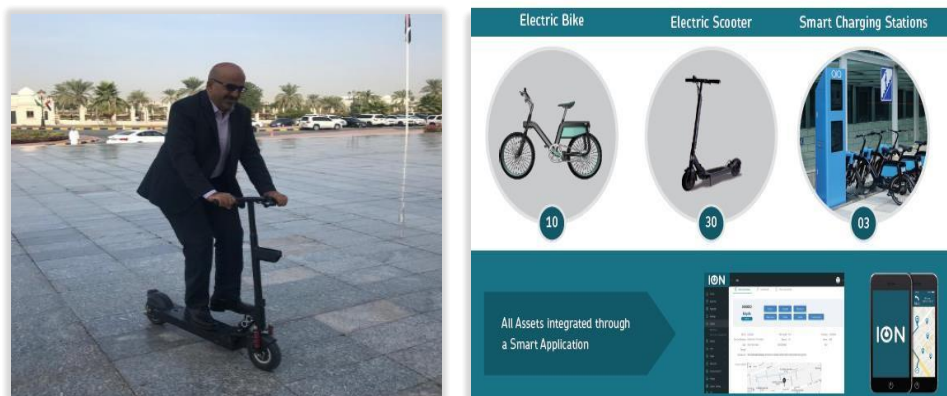


Figure 17: Testing the electric scooter.

Figure 18: Electric bikes and scooters.

6.6 Sustainability Studies Circle



Leader: Dr. Anwar H. Jarndal

Department of Electrical Engineering

College of Engineering

The first step towards developing a sense of responsibility in students, staff and faculty members towards achieving sustainability is by educating them on the importance of sustainability and the means to be taken to achieve it. Enlightenment can be brought about through conducting research and studies, and suggesting and sharing inventive ideas amongst one another. Thus, the Sustainability Office should ensure that the faculty members merge sustainability in their academic programs by encouraging their students to carry out researches in various sustainability topics. The university library should also respond to that intent by providing the resources necessary for research as a form of assistance.

Goals

1. Conducting studies/researches to understand sustainability challenges and develop innovative ideas to address those challenges.

KPIs

1. Percentage number of the faculty and/or staff that are engaged in sustainability research.
2. Percentage of research-producing departments that are engaged in sustainability research.
3. An ongoing program to encourage students in multiple disciplines or academic programs to conduct research in sustainability.
4. A program to encourage faculty from multiple disciplines or academic programs to conduct research in sustainability topics.

5. Written policies and procedures that give positive recognition to interdisciplinary, transdisciplinary, and multidisciplinary research during faculty promotion and/or tenure decisions.
6. Ongoing library support for sustainability research and learning.
7. The number of the institution's research-producing divisions that are covered by a published open access policy, which ensures that versions of future scholarly articles by faculty and staff are deposited in a designated open access repository. (All, Some or None).
8. The institution provides financial incentives to support faculty members with article processing and other open access publication charges.

Current Projects and Achievements

Sustainability studies (research):

UOS has allocated funding to encourage research related to sustainability as follow:

- Total research fund dedicated to sustainability research in 2016 is 3,057,100 AED
- Total research fund dedicated to sustainability research in 2017 is 2,069,670 AED
- Total research fund dedicated to sustainability research in 2018 is 1,712,400 AED
- The averaged annum last 3 years of research fund was 2,279,723 AED

New Initiatives

1. Establishing a research group to conduct studies and researches toward developing a sustainable university campus.

6.7 Continuous Improvement and Sustainability Studies Excellence Circle



Leader: Dr. Hamdi Bashir.

Department of Industrial Engineering and Engineering
Management

College of Engineering

No Sustainability Circle can be effectively implemented without continuous improvement. Thus, the Continuous Improvement and Sustainability Excellence Circle was established to better implement sustainability with respect to the changing environmental factors and individual needs. Through tracking the progress of achieving sustainability, the university can revisit overcome difficulties to learn from and better enhance solutions.

Tasks

1. Map of sustainability indicators into the identified KPI by the various circles.
2. Model and analyze interdependencies among the identified KPI.
3. Identify opportunities for improvement.
4. Help in prioritizing sustainability projects and initiatives.
5. Monitor and measuring progress in achieving the sustainability targets.
6. Contribute in creating a culture of continuous improvement (Continuous improvement should be the responsibility of everyone in the university (not just for the sustainability teams)).



6.8 Workplace Health, Safety and Wellbeing Sustainability Circle



Leader: Dr. Salaheddine Bendak.

Department of Industrial Engineering and Management
Department
College of Engineering

Individuals are the peripheral of the wheel of sustainability and should receive every care in order to thrive and assist in driving the sustainability process. This Sustainability Circle takes every measure to protect every individual from any accident, and continuously monitors his or her health and safety. The measures can extend so to cover non-health precautions such as indoor air quality and carbon footprint level. The circle member meets periodically as shown in *Figure 19* to discuss effective way to spread the workplace health, safety and wellbeing awareness across the university community.



Figure 19: The circle aims to spread the message of health, safety and wellbeing across the university community through seminars, short workshops, roll-up banners, pop-up messages and others.

Goals and KPIs

1. Goal: Achieving high satisfaction rate among UOS employees.
KPI: Employees satisfaction rate.
2. Goal: Providing wellness programs at UOS.
KPI: Number of wellness programs, initiatives and activities.
3. Goal: Providing a safe environment to UOS students, staff and faculty members.
KPIs: Number of accidents on campus and number of safety initiatives/activities.
4. Goal: Providing a green office environment for UOS staff and faculty members.
KPIs: Number of relevant initiatives and average number of plants per office in UOS offices.
5. Goal: Minimizing carbon footprint of UOS.
KPIs: Number of relevant initiatives and carbon footprint level.
6. Goal: Improving indoor air quality at UOS buildings.
KPI: Indoor air quality at UOS.
7. Goal: Improve driving behavior of road users within the university.
KPIs: Number of awareness programs and number of traffic collisions inside campus.
8. Goal: Improving adherence to safe behaviors within university laboratories.
KPIs: Number of accidents in UOS laboratories and observed number of safety violations.
9. Goal: Providing a work and study user-friendly environment for disabled people.
KPIs: Number of relevant initiatives and changes in the university.

New Initiatives

1. Establishing an office wellness program and hiring a graduate research assistant to develop and implement it (submitted).
2. Establishing an activity/wellness area for younger teenagers in Khawarizmi Compound (submitted with Community Partnership Circle).
3. Planning an awareness function in the next fortnight in cooperation with Awareness Circle.

6.9 Energy and Climate Change Sustainability Circle



Leader: Dr. Chaouki Ghenai.

Department of Sustainable & Renewable Energy Engineering
College of Engineering

Energy is a key driver and the Energy and Climate Change Sustainability Circle takes all measures to minimize its consumption and sustain its production. In reducing the energy usage of the university buildings, street lighting and transportation, the university will also manage to cut costs. Consequently, this Sustainability Circle hopes to prevent negative environmental impacts, particularly greenhouse gas emissions.

Goals

1. Develop comprehensive strategy to examine energy use, associate costs and environmental impacts (greenhouse gas emissions) at the University of Sharjah campus and propose energy saving plan to reduce the energy usage for the University buildings, street lighting and transportation.

KPIs

1. Total Electricity Usage per Year (kWh) at UOS campus.
2. Renewable energy produced inside the campus (kWh).
3. Green Building Implementation (construction and renovation) & Energy Efficient Appliances.
4. Greenhouse Gas Emissions.

Current Projects and Achievements

1. Parabolic Trough Solar Collector Air Conditioning System - Roof W12 (SEWA project).
2. Smart Sensor and Doors - Reduce the cooling load.
3. Energy Monitoring - M9 Building.
4. LED Lighting - University of Sharjah
5. All UOS light bulbs had been replaced with more efficient LED panels, as shown in *Figure 20*.



Figure 20: Replace light bulbs with led panels.

6. UOS purchased energy efficient computers, laptops and printers for the offices, see *Figure 21*.

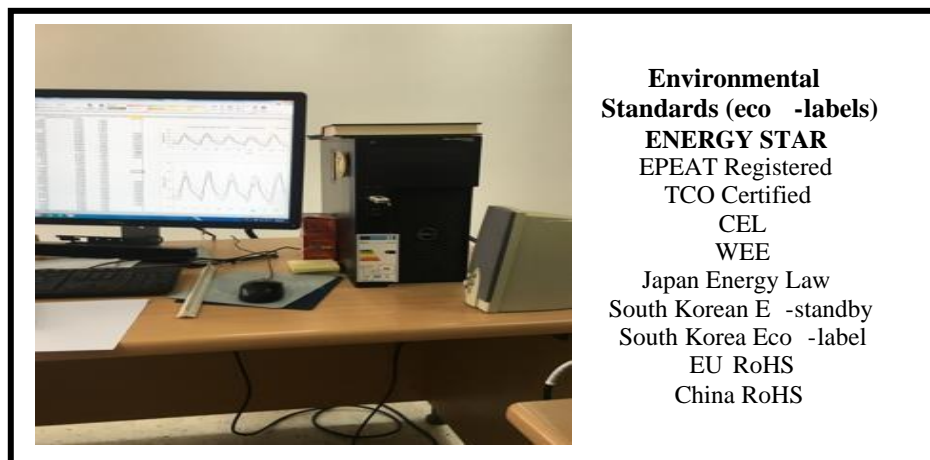


Figure 21: Energy efficient computers used in USO.

7. UOS Solar House - Solar Decathlon

UOS built solar house to participate in the 2018 solar Decathlon in Dubai. The solar house includes the following efficient appliances: Class A+ refrigerator, Class A+ Oven, Class A++ Freezer, Photocatalytic LED indoor lighting devices, as shown in *Figure 22*.



Figure 22: Solar house (Solar decathlon).

8. Hybrid Solar PV-Thermal Systems - Grid-Tied 3 KW Solar PV and Roof W12 (SEWA project).
9. Shrouded Wind Turbine - W12 Roof.
10. Energy Recovery - Solar PV for Golf Cart Charging.
11. Corridors – UOS - Double Glazing - reduce cooling load.
12. UOS installed automatic doors and air curtains for doors to reduce the cooling load of buildings, as shown in *Figure 23* and *Figure 24*.



Figure 23: Air curtain for doors.



Figure 24: Automatic doors.

New Initiatives

Energy Monitoring System for Building – M9 Building

- Total energy consumption for M9
- Energy Savings (reduce energy consumption)

Agriculture Green House

- Integration of Renewable Energy System
- (Design of solar PV system for the greenhouse) New Strategic Initiative: Submitted
- Electric Vehicle Charging Station Powered with Renewable and Sustainable Energy System at the University of Sharjah.

6.10 Water Resource Management Sustainability Circle



Leader: Dr. Mohsin Siddique.

Department of Civil and Environmental Engineering
College of Engineering

With water being one of the most consumed resources on the university campus, the Water Resource Management Sustainability Circle attempts to reduce water consumption and preserve the quality of the amount consumed. This circle also strives to implement recycling practices such as the reuse of rainwater and AC water, the reuse of wastewater for cleaning purposes, and the installation of waterefficient devices.

Goals

The water resources management sustainability circle aims to:

1. Reduce water use by reducing campus water withdrawals.
2. Conserve water and make efforts to protect water quality. To treat water as a resource and to utilize it as such, rather than a waste product.

KPIs

- Annual water use per person.
- Annual water use per gross floor area.
- Annual water use per vegetated ground (potable and non-potable).
- Rainwater/AC/grey water reuse.
- Green infrastructure & LID practices, policies, plans, etc.

Current Projects and Achievements

- Installing water efficient devices & smart meters

Water nozzles were installed in washing rooms around the campus, water nozzles reduce the amount of water flow coming out of the tap, and as a result reduce the total amount of water consumed, *Figure 25*.



Figure 25: Water nozzles at washrooms.

- During 2017/2018, University of Sharjah has installed many smart water devices at various location (e.g., academic buildings, dormitories, mosque, faculty housing). The objective is to understanding the water consumption behavior in order to establish monitoring & control system. Water consumption data is being recorded and analyzed.
- Water re-use

The University City of Sharjah trucks have a combination of fresh and treated wastewater for cleaning purposes of roads and pedestrian walkways, as shown in Figure 26. Over 60% of the irrigation water for green area at University City is recycled grey water.



Figure 26: Trucks with treated waste water.

New Initiatives

The following two initiatives are proposed and have been approved.

- Installing water efficient devices

This is the continuation of project initiated during 2017/2018.

- Water Education: Water conservation awareness campaign.

To raise awareness at all levels of university about the importance of saving water to cope with its scarcity and ensure sustainability. The aim is to change user's attitudes and behavior to improve the water use efficiency.

Future Initiatives

Water Harvesting: The direct collection of water (e.g., rainwater, condensed water from ACs and greywater).

- Re-use of AC condensed water from air-conditioners for cleaning and gardening purposes: All air conditioning systems that produce condensation drains condensed water. Typically, it flows into a floor drain, sewer line or simply outside into the yard. A simple way to recycle this condensed water in a home is to have the drain line running into a rainwater barrel or other storage container.
- Rainwater harvesting: A specially designed landscape that could be used as storage reservoir in the rainy season for water harvesting is practiced worldwide. If adopted it is proposed to create a playground, such as small football or tennis stadium that will be exploited by faculty and staff kids during the year and as water harvesting storage during the rainy season.

Water Education:

The objective of this initiative is to raise water conservation awareness through water education.

This can be achieved through:

- Awareness campaigns on water conservation among faculty, staff and students (using proper education materials such as brochures, posters, animations etc.).
- Create or adopt a university compulsory course (such as “Man and the environment”).
- Use of students clubs etc.
- Holding student competition for innovation ideas.

Initiatives and their time frame

Short-term recommended actions (ST)**

- Installing new water efficient technology devices
- Implementation of Water Metering and Control Systems
- Water Education

Mid-term recommended actions (MT)

- Implementation of Water Metering and Control Systems - Water Harvesting [AC water & Rain]

Long-term recommended actions (LT)

- Water Harvesting [AC water & Rain]
- Installing new water efficient technology devices
- Landscape irrigation
- Water Education

[**ST: Short term, MT: Medium term, LT: Long term]

6.11 Waste Management Sustainability Circle



Leader: Dr. Mohamed Abdallah.

Department of Civil Engineering and Environmental Engineering
College of Engineering

Waste recycling and reduction has always been one of the most common solutions proposed to help save the environment. In addition to that, the Waste Management Sustainability Circle covers every other aspect of waste management, including reusing and diverting waste. In this Sustainability Circle, the concept of waste is not restricted to the litter and residue of materials. Rather, it incorporates waste from other fields such as energy, construction and demolition, and electronic gadgets. Therefore, this Sustainability Circle offers several and diverse means to deal with waste in conformity with the different fields.

Goals

1. Move towards a zero-waste campus by diverting maximum amount of waste from landfills.
2. Promote waste reduction & reuse programs on campus.
3. Apply waste segregation, recycling & composting for material recovery.
4. Implement energy recovery systems on campus.
5. Minimize and safely dispose of hazardous waste, including lab- and e-waste.
6. Manage the construction & demolition wastes using eco-friendly techniques.
7. Raise awareness of the campus community about sustainable waste management.

KPIs

1. Waste Minimization
 - Total amount of waste reduced on campus annually (ton/year).
 - Specific amount of waste reduced per campus user annually (ton/person/year).

2. Waste Reuse

- Total amount of waste reused on campus annually (ton/year).
- Specific amount of waste reused per campus user annually (ton/person/year).

3. Waste Diversion

- Total amount of waste diverted on campus annually (ton/year).
- Specific amount of waste diverted per campus user annually (ton/person/year).

4. Waste Recycling

- Total amount of waste recycled on campus annually (ton/year).
- Specific amount of waste recycled per campus user annually (ton/person/year).

5. Energy Recovery

- Total amount of energy recovered on campus annually (kWh/year).
- Specific amount of energy recovered per campus user annually (kWh/person/year).

6. C&D Waste Management

- Total amount of C&D waste diverted from landfill (ton/year).
- Fraction of C&D waste diverted from landfill (%).

7. Hazardous Waste Management

- Fraction of hazardous waste safely managed (%).

8. Electronic Waste (E-waste) Management

- Total amount of e-waste segregated, reused, or recycled on campus annually (ton/year).
- Fraction of e-waste segregated, reused, or recycled (%).

Current Projects and Achievements

1. Recycling

- Recycling blue bins are available in some offices and departments at the university in order to facilitate the recycling for students, staff, and faculty members as shown in *Figure 27*.



Figure 27: Recycling bin distributed around the campus.

2. Paper Work Reduction & E-Communications

- As per the internal memo by the University Chancellor, UOS staff and faculty members are encouraged to reduce paper work and move to electronic communications.

3. E-Archiving System

- For 3,055 courses, 98 programs, 700 faculty members & 15000 students, UOS automated all files by implementing an E-portfolio system.

4. Double-sided Printing

- The Sustainability Office sends regular announcements regarding double-sided printing for students, staff, and faculty members.

5. Donation

- The university has multiple donation boxes distributed on campus as shown in *Figure 28*.



Figure 28: Donation boxes are distributed throughout the campus.

6. Green Waste

- Green wastes are collected, as shown in *Figure 29*, and transported to a nearby composting facility. The fertilizer produced from this is reused as a soil conditioner.



Figure 29: Green waste collected.

7. Electronic Waste

- E-waste depots are located throughout the campus to receive various kinds of electronic waste, as shown in *Figure 30*. Those depots are emptied regularly.



Figure 30: Collecting inorganic (electronic) waste.

8. Hazardous Waste

- UOS manages the toxic waste through a qualified waste disposal contractor called "Wekaya", as shown in *Figure 31*. The contractor is approved both by the ministry of health and Sharjah municipality, and is working according to UAE Environmental Laws, which are:
 - o Law No 24 of 1999
 - o Cabinet Resolution No 37 of 2001G
 - o Executive Board Resolution No 5 of 2001G



Figure 31: Collecting Hazardous (toxic) waste.

- UOS has a separate contract for each facility in order to effectively manage the waste based on each waste generator.
- Treatment is carried out at the waste treatment plant located in Al Sajaa.

New Initiatives

1. Recycling

- Promote recycling inside the university buildings.
- Supply desk-side recycling bins for paper products, beverage containers, and cardboard in all campus offices and classrooms.
- Supply suitable recycling bins for faculty housing and student dorms.
- Propose a new effective recycling-based waste collection system for the campus.

2. Awareness Programs

- Promote a paper reduction policy with programs such as: "Think before you print", "Print double-sided", "Consider not printing at all", and "Green paper-free meetings".
- Switch to reusable mugs, water bottles, and bags within campus.

3. Donation Station

- Establish donation stations at convenient locations on campus.
- Stations can receive items such as furniture, clothes, homeware, books, etc., (particularly during moving out of staff & students from the campus community).
- Free pick-up can be arranged to encourage participation.
- Donated items can be sold for a low price to sustain the operation of the facility.

4. E-waste Depot

- Establish convenient E-waste drop-off locations on campus.
- Those depots can receive ink/toner cartridges, cell phones, computers, monitors, televisions, and most other electronic items and peripherals.
- Reusable items can be sold for a low price to sustain the operation of the facility.

5. University Facilities

- Centralize printers and copying machines: Currently, a study is being conducted to get rid of all decentralized printers and replace them with centralized ones.
- ## 6. Composting
- A large fraction of waste, particularly grass trimmings and kitchen waste from restaurants and households can be turned into a useful soil amendment through composting.
 - The composting process can be easily implemented and operated on campus.
 - The compost can be used to fertilize green areas on campus, or to be sold externally.

6.12 Sustainable Curriculum Circle



Leader: Dr. Iyad AL Qasir.

Department of Mechanical and Nuclear Engineering Department
College of Engineering

Sustainability courses can provide valuable ground in the concepts and principles of sustainability. They ensure that the institution's approach to sustainability education is comprehensive and includes diverse topics. In addition, they will help students to develop a broad understanding of the field of sustainability.

**INSPIRING THE NEW GENERATION OF SUSTAINABILITY LEASERS
THROUGH THE CLASSROOM.**

Goals

To integrate sustainability concepts into the curriculum to prepare students to apply sustainability principles in their professional fields.

KPIs

- Percentage of undergraduate and graduate courses offered that are sustainability-focused.
- Percentage of undergraduate and graduate courses offered that are sustainability-inclusive.
- Percentage of academic departments that offer sustainability courses.

New Initiatives

- To offer a university elective sustainability-focused course.

6.13 Building Operations and Maintenance Sustainability Circle



Leader: Mohammed Kamil, PhD

Department of Mechanical and Nuclear Engineering.

College of Engineering

The Building Operation and Maintenance Sustainability Circle (BOMSC) ensures that the buildings and facilities of the university are user-friendly, and are compatible with the individuals' needs. It also ensures that the services are provided at the lowest costs possible. Like most sustainability circles, the Building Operation and Maintenance Sustainability Circle incorporates other sustainability tasks that are of relevance to the operation and maintenance of the university campus, lands, buildings and equipment. This includes preserving the indoor and outdoor air quality, substituting energy sources with more renewable ones and protecting the environment, among many others.

Goals

The Building Operations and Maintenance Sustainability Circle (BOMSC) aims to provide leadership in sustainable operations and maintenance of University of Sharjah (UOS) campuses, lands, buildings and equipment that will align with the goals of the sustainable strategic initiatives.

Strategic Goals:

- Develop new facilities, in addition to major renovations of occupied facilities that would meet or exceed the Certified Rating of the LEED® (Leadership in Energy and Environmental Design) Rating System, when feasible.
- Implement sustainable building principles in all new and existing buildings to achieve measurable life cycle cost savings.
- Support and promote sustainable building principles and operational initiatives, including energy reduction, water conservation and improved air quality.

KPIs

1. Measuring the progress in the achievable level under the LEED® rating system.
2. Estimating the save in energy, cost, and detrimental environmental flows after various awareness strategies applied to the university stakeholders.
3. Identifying the number of activities to be conducted to raise awareness in sustainable operation and maintenance (such as seminars, talks, workshops, and alike).

Current Projects and Achievements

1. Different events and seminars were conducted that are related to sustainable building operations and maintenance and directed to students, staff and faculty members in the university, as shown in *Figure 32*.



Figure 32: Seminar on energy saving, green sustainability.

New Initiatives

1. Indoor Air Quality

The members of BOMSC will assure and confirm that work and learn in the buildings of UOS are with a high standard of indoor environmental quality. Cleaning chemicals used on campus comply with the Green Cleaning Standard. Reported air quality issues are investigated thoroughly to determine if air testing is necessary. It will continue to incorporate the use of carbon monoxide level monitoring in occupied spaces and monitors for carbon monoxide in all residential living spaces on campus.

2. Reduce energy

The members of BOMSC will assure and provide that advice to the University management that the building A/C systems have methods to reduce unnecessary airflow in times of low occupancy by the use of occupancy sensors, CO2 monitoring and scheduling of VAV airflows through the Building Automation systems. Systems can be shut down when not in use. Existing systems are retrofitted under these same guidelines. Lighting systems include the installation of sensors and controls to detect occupancy and reduce output during unoccupied times. The LED lighting is used in all new installations and used to replace all fluorescent lights as they burn out.

3. Cleaner energy sources

BOMSC will assure that the UOS continues to evaluate the use of renewable energy sources on campus.

4. Protect the Environment

BOMSC will continuously monitor and ensure that the campus grounds are maintained by regular maintenance and upkeep of the lawns, gardens, upland area and green roofing.

5. Waste Reduction

BOMSC will assure and provide the advice that the amount of waste materials is reduced by reusing products that are repurposed. Products that cannot be repurposed are recycled in a manner that is most beneficial and conducive for the environment. The UOS continues to recycle, computers, electronics, batteries, ink cartridges, fluorescent light bulbs, and hazardous materials.

6. Energy Performance

BOMSC will assure and provide the advice that the building metering is used on electric, improving building efficiencies and system operations by Benchmarking consumption. Energy audits and retro commissioning are performed to identify energy-related improvements. A comprehensive Equipment Maintenance plan is followed to maintain equipment at peak performance.

7. Water reduction

BOMSC will assure and provide the advice that all campus buildings are required to have low flow/ water- saving fixtures. The University uses native plantings throughout the campus to reduce the need for irrigation.

8. Outdoor Air Quality

BOMSC will assure and provide the advice that all the outdoor air quality surrounding the campus will continue to be improved by the reduction of harmful emissions by converting campus equipment to cleaner fuel sources and by reducing equipment operating times utilizing schedules, temperature set-backs controls and energy recovery systems. Reduction of emissions from vendor and UOS owned vehicles is accomplished by encouraging and enforcement of clean new vehicle technologies such as electric and hybrid vehicles.

6.14 Water Science and Technology Sustainability Circle



Leader: Dr. Lucy Semerjian.

Department of Environmental Health Sciences

College of Health Sciences

This circle aims to disseminate knowledge and spread awareness on water quality and water conservation matters, Ensure safe water quality throughout the existing on-campus bottled water coolers and Support the move towards less bottled waters through tap water filtration and monitoring initiatives.

Goals

- Making efforts to reduce water use on-campus and promote water reuse, as applicable.
- Disseminating knowledge and spreading awareness on water quality and water conservation matters.
- Ensuring safe potable and domestic water quality.
- Ensuring safe water quality throughout the existing on-campus bottled water coolers.
- Supporting the move towards less bottled waters through tap water filtration and monitoring initiatives.

Suggested KPIs

- Reduction in water use per person (STARS criteria).
- Reduction in water use per unit of floor area (STARS criteria).
- Reduction in water withdrawal per unit of vegetated grounds (STARS criteria).
- Reduction in reliance on bottled water dispensers and increase in tap water dispenser use.
- Reduction in plastic wastes generated by discarded bottled waters.

Current Projects and Achievements

- Collaboration with the sustainability manager in the American University of Sharjah (AUS) on various projects such as the water filtration, see *Figure 33*.



Figure 33: Meeting between UOS and AUS to discuss partnership.

- Publishing a step-by-step guide on how the UOS community (and beyond) can clean their bottled water coolers for safer water quality as shown in *Figure 34*.

How to Clean a Top-Loading Water Cooler?

Water coolers (dispensers) need to be cleaned and maintained regularly to ensure safe water and prevent bacterial buildup



A Step-by-Step Guide How to Clean:

1. Prepare the cleaning solution: Bleach or white vinegar solutions- both are perfectly safe and effective ways to kill germs and rid the dispenser of any mold or mildew.
 - **Gentle bleach solution:** mix 4.5 Lit of tap water with 1 tablespoon (~15 ml) of unscented chlorine bleach (5%) in a bucket. Stir well, making sure not to spill any bleach on your clothes and make sure to wear clean rubber gloves.
 - **White vinegar solution:** Add 1 Lit of vinegar to a bucket and fill with 3 Lit of warm water. Stir well.
2. Shut off the cooler and unplug the power cord from the electrical outlet to avoid shocks and to allow safe movement around the cooler without tripping over electrical cords
3. Remove the water bottle and drain all remaining water through the pegs or spigots
4. With the valve and the top of the water bottle holder exposed, inspect for any mildew or dirt build-up. If there is any, wipe it away with a paper towel. Dip a clean sponge into the cleaning solution (prepared in Step 1) and thoroughly wipe down the area where the water bottle meets the dispenser.
5. Remove the water guard (lid and baffle). If your water dispenser has a guard that punctures the water bottle when you install it, remove this piece.
6. Remove the drip guard and any tray or trivet that holds your water cup below the spigot.
7. Disinfect the reservoir: Pour cleaning solution (from Step 1) into the reservoir through the top of the water dispenser and scrub the inside with a clean, long-handled brush with soft bristles. Allow it to sit for three to five minutes before draining the solutions through the spigots into a bucket. Alternate spigots to make sure both lines are clean. Dispose of the bucket content into the sanitary system.

8. Rinse the reservoir: Pour 8 Lit of clean water into the reservoir and drain through each spigot. Once it is empty, fill with another 4 Lit of water and taste. If you detect a vinegar taste or bleach smell, add another 8 Lit of clean water, drain and retest.
9. Clean the removed plastic parts (lid, baffle, water drip guard, drip tray, etc.) as follows:

- Put the parts in hot, soapy water
- Rinse the parts with clean water
- Clean the parts with the cleaning solution
- Let the parts dry completely or dry them with a clean cloth

10. Replace all parts and wipe the outside of the cooler with a clean, hot, soapy cloth. Wipe soap and dry with clean cloth
11. With clean hands wipe the top and neck of new bottle with bleach solution, remove the cover from the new bottle's neck, and mount the bottle onto the cooler
12. Plug in the machine and allow it to chill the water for 30 minutes to an hour before use.

Note that some machines may vary, and the manufacturer's manual should be followed for additional details on troubleshooting, cleaning and maintaining of the water dispenser.

Additional tips:

- Clean your water cooler regularly to help keep it running well
- Once a month, check the wire grid across the back of the cooler for lint and dust build-up. Vacuum or clean these areas with a brush.
- Unplug your water cooler whenever it is out of water.
- Ensure proper bottled water storage
 - Store indoors in a clean, cool, and dry place (away from chemicals and janitorial supplies)
 - Do not store in direct sunlight or above room temperatures
 - Do not store for more than 30 days to avoid harmless bacterial multiplications

Figure 34: Step-by-step guide to clean water coolers.

- Providing water quality expert support to the initiatives related to moving towards less bottled waters through adequate tap water filtration systems and monitoring initiated by Office of Vice Chancellor for Financial and Administrative Affairs.
- Moreover, the quality of water used in the sustainable garden has been tested by taking water samples.
- Spreading public awareness on water quality, sanitation and water conservation matters through departmental and student led activities (e.g. World Water Day, EHS Day, etc.)
- Engaging students in research projects as well as conducting research related to water quality, science, and technology.
- Water filtration system: The University is planning to reduce the reliance on plastic bottled water since it is unsustainable; keeping in consideration the public perception that tap water is not drinkable. A real need for change must be done for both an environmental impact and a public perception. The sustainability office thereby started the bottle free water filtration initiative where meetings with companies that offers a solution in the field of tap water filtration were conducted. After receiving the best offer, the project will start with placing three testing units in three different locations in the university then study the results.

New Initiatives

- Adopt water conservation strategies (water saving devices/appliances, greywater/ wastewater/AC drain water reuse).
- Ensure safe water quality (bottled water coolers, tap dispensers).
- Shift to more sustainable choices and practices in potable, domestic, and other water uses.
- Spread awareness on water quality and water conservation matters and possibly provide incentives for water savers (through student orientation, EcoReps, sustainability ambassadors/water champions, pledges, residence hall water (energy, etc.) saving competitions, water wastage hotline, community outreach, etc.).

6.15 Food and Dining Sustainability Circle



Leader: Dr. Leila Cheikh Ismail

Department of Clinical Nutrition and Dietetics Department
College of Health Science

Seeing that food is one of the essential components of life, the Food and Dining Sustainability Circle ensures the provision of food sustainably and in fulfillment to the needs of every individual on campus. This also includes checking the source and quality of the food provided. The Sustainability Office strives to achieve sustainability to the fullest extent by reusing food waste and recycle unconsumed food products. Through educating students, staff and faculty members on the importance of food sustainability, they are provided with the opportunity to contribute with respect to safety measures.

Goals

The food and dining sustainability circle aims to:

1. Support a sustainable food system: UOS can use its purchasing power to require transparency from their distributors and find out where the food comes from and how it was produced. Institutions can use their food purchases to encourage safe, environmentally friendly and humanitarian farming methods; and help eliminating unsafe working conditions and support sustainable agriculture. These actions help reducing environmental impacts and support fair and resilient food systems.
2. Operate the dining services sustainably by preventing food waste and diverting food materials from the waste stream, by making low impact dining options available, and by educating their customers about more sustainable options and practices.
3. Managing food waste initiative: the goal behind this initiative is to distribute or recycle the extra food that is generated, where it can be treated and composed to be used as organic fertilizer that can be use in the sustainable garden project in UOS, or to be distributed to people in need through contacting companies specialized in this field in case the food was in good conditions.

6.16 Awareness of Sustainability Circle



Leader: Dr. Ahmed Farouk Radwan.

Department of Public Relations

College of Communication

The Awareness Sustainability Circle aims to develop positive sustainability behaviors among the UOS stakeholders by raising the sustainability awareness level throughout seminars, newsletters, videos and social media.

Goals

1. Giving information about sustainable life.
2. Create positive attitudes about sustainability
3. Changing behaviors to be more sustainable

KPIs

1. Positive and sustainable attitudes.
2. Saved resources.
3. The perception of the UOS population regarding sustainability issues.

Current Projects and Achievements

1. TV program with Dr. Imad Alsyouf Director of the Sustainability Office, to give information about the office objectives, activities and circles, produced by cooperation with College of communication studios.
2. Graduation project about “electricity consumption awareness campaign. (College of communication, Al Dhaid Campus).
3. Published informative brochure about the sustainability office, to be distributed on the sustainability year 2020 event.
4. Published monthly newsletter to coverage all events and activities related to sustainable circles.

5. Radio program with Dr. Ahmed Farouk, awareness leader, about the sustainability concept and its importance in the university community. Produced by cooperation with College of communication studios. (Etisal FM, College of communication online Radio Station).
6. Produced 4 sustainability short films on the sustainability practices in Fine Arts College, Workplace Health, Safety and Wellbeing Sustainability Circle, Community Partnership Sustainability Circle and Female Students Sustainability Activities Circle.

Link:

<http://www.sharjah.ac.ae/en/Administration/Sustainability/Pages/default.aspx>

Campaign communication tools:

- Direct communication (special events) • Printings (posters, Brochures & flayers)
- Newsletters.
- Short videos.
- University website.
- New Media (Social media).

New Initiatives

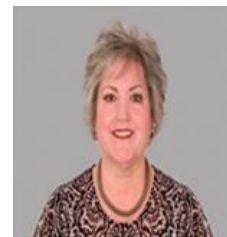
Awareness campaign to spread sustainability around UOS, based on:

- Short films produced by cooperation with college of communication studios.
- Graduation project about sustainability concept by cooperation with Graphic design and multimedia program in college of communication.

6.17 Animal Welfare Sustainability Circle



**Leaders: Ms. Shabnam Fatima and
Ms. Sheri Gangluff**
College of Arts, Humanities, and Social Sciences



Goals

Short-Term Goals

1. Ensure control of the stray cat population through the TNR (Trap-Neuter-Return) approach.
2. Create designated feeding stations.
3. Seek volunteers to help with trapping, transporting and returning cats after surgical procedures.
4. Organize donation drives for food and other necessary support such as medical supplies and pet carriers.
5. Create awareness in the community about the benefits of TNR.
6. Represent the University of Sharjah at local, regional and international animal welfare workshops, forums and conferences.
7. Promote the University of Sharjah as an animal friendly environment for the sustainability of the community through uses of social media and other public forums.

Long-Term Goals

1. Make arrangements for care during summer months, including regular provision of food and water, and the construction of permanent air-conditioned shelters on campus.
2. Set up on-campus vet services.
3. Seek cat wellness through medical treatment and vaccinations against diseases.
4. Respond to the needs of cats and other animals requiring urgent medical attention.

KPIs

1. Detecting a slower growth in the cat population.
2. Discerning signs of healthier cats.
3. Observing fewer cats with indications of disease and/or fighting with other cats.
4. Perceiving a growing interest among students and faculty in animal care.

Current Projects and Achievements

1. Arrange for off-campus veterinary services for TNR.
2. Develop awareness campaign within the University of Sharjah community.
3. Visit local grocery stores to collaborate in food donation campaign.
4. Seek volunteers and necessary support, for that an announcement has been posted as shown in *Figure 35*.

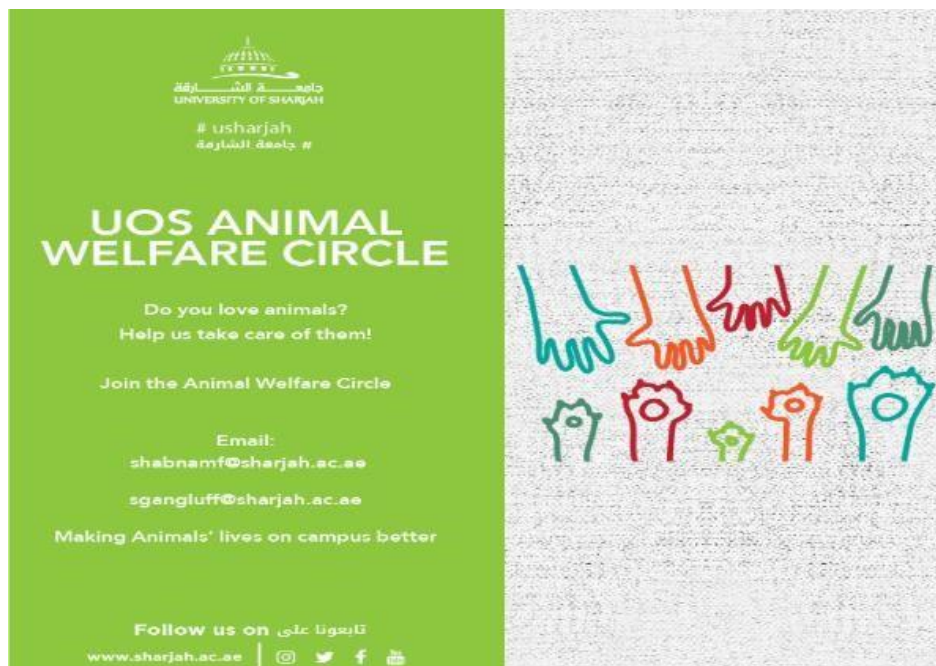


Figure 35: Animal welfare announcement.

Future Initiatives

1. Establish similar initiatives at the University of Sharjah branch locations.
2. Extend awareness campaign throughout the Emirate of Sharjah.
3. Collaborate with other organizations and government authorities in addressing the welfare of animals in the UAE.
4. Collaborate with government authorities to help in the funding of animal welfare in the Emirate of Sharjah community, for example through traffic violation payments.
5. Promote pre-vet and Veterinary Technician degree programs for students at the University of Sharjah.
6. Promote Doctor of Veterinary Medicine (DVM) degree program for students at the University of Sharjah.
7. Promote partnership with the Royal College Veterinary of Surgeons (RCVS), London, U.K. for the registration of UOS students obtaining DVM degrees.
8. Provide on and off campus mobile vet services, affiliated with a veterinary program at the University of Sharjah.
9. Promote the establishment of a permanent UOS veterinary service, affiliated with veterinary degree programs at the University of Sharjah.

6.18 People with Disabilities Sustainability Circle

Leader: Ms. Fatma AL Muaini.

Disability Resource Center

Since the Sustainability Office considers individuals to be the essence of the sustainability process, it caters for every social group, with the people of determination taking the lead. Through the People with Disabilities Sustainability Circle, a Disability Resource Center is established to fulfill the needs of male and female students with disabilities. The main goal of the center is to eliminate any form of discrimination between students and provide them with equal educational opportunities. The services of the center start from providing assistance in registering in university programs all the way to guiding them with choosing a suitable career. The People of Determination Sustainability Circle also ensures that the university campus, building and facilities are user-friendly in that they correspond to the students' needs, such as the abundant availability of elevators and ramps. However, disability facilities are distributed all over the campus as shown in *Figure 36*.



Figure 36: Facilities for disability.

Main –Goal

1. To be pioneers in the universal access and universal design for the sustainable empowerment of the people with disabilities at higher education institutions.

Sub-Goals

1. Create awareness on the importance of sustainability in universal access.
2. Contribute to developing the infrastructure and information network.
3. Activate areas of cooperation and research collaboration.
4. Improve areas of sustainability in universal access.

KPIs

1. Assessment of the current situation regarding universal access People with disabilities at the University of Sharjah.
2. Rate of areas requiring the development of universal access for People with disabilities at the University of Sharjah.
3. Rate of progress and improvement in universal access for People with disabilities at the University of Sharjah.

Achievements

First: Studies Conducted

Subject of Study	Completion Date
- Survey: Diagnosing the current status of the people with disabilities' access to theatres and auditoriums at the University of Sharjah	May 5, 2019
- Survey: Diagnosing the current status of the water closets designed for the people with disabilities at the University of Sharjah	April 29, 2019
- Survey: Diagnosing the current status of the car parking spaces designed for the people with disabilities at the University of Sharjah	April 9, 2019

Second: Proposed Initiatives and Projects

Subject of Study	Completion Date
- Sustainable empowerment of the people with disabilities at higher education institutions	In progress
- First forum of universal design and access for a sustainable university environment	May 21, 2019
- Professional diploma in sign language at the University of Sharjah	April 10, 2019

Third: Sessions of Analysis, Consultation, Dialogue and Knowledge

- Analysis Sessions

Session Subject	Session Date
- Measuring extent of appropriateness of the UOS information technologies using SWOT analysis (with the leader and members of the information technology sustainability circle team)	May 20, 2019
- Measuring awareness sustainability at the University of Sharjah using SWOT analysis (with the leader and members of the awareness sustainability circle team)	May 19, 2019
- Measuring the extent of inclusion in the student activities at the University of Sharjah using SWOT analysis (with the leader and members of the student activities sustainability circle team) (female students)	May 16, 2019
- Measuring extent of appropriateness of the UOS study courses using SWOT analysis (with the leader and members of the appropriateness of the study courses sustainability circle team)	May 16, 2019
- Measuring extent of appropriateness of the UOS building environment using SWOT analysis (with the leader and members of appropriateness of the UOS building environment sustainability circle team)	May 13, 2019
- Measuring the extent of inclusion in the student activities at the University of Sharjah using SWOT analysis (with the leader and members of the student activities sustainability circle team) (male students)	May 12, 2019
- Measuring extent of appropriateness of the UOS transportation using SWOT analysis (with the leader and members of appropriateness of the UOS transportation sustainability circle team)	May 12, 2019

- Consultation Sessions

Session Subject	Session Date
- Universal access for the people with disabilities in the field of information technology (with Prof. E'qab R. Almajali, College of Engineering, University of Sharjah)	May 26, 2019
- Updates of the consultation task of sustainable empowerment of the people with disabilities at higher education institutions (with the leader of the sustainability teams and the director of the sustainability office)	May 21, 2019
- Consultation session to consider the project: sustainable empowerment of the people with disabilities at higher education institutions (with the leader of the sustainability teams and the director of the sustainability office)	April 15, 2019
- Consultation session to consider the project: an academic program (professional diploma or postgraduate diploma) in sign language at the University of Sharjah (with the program sustainability team leader)	April 15, 2019

- Dialogue Sessions

Session Subject	Session Date
- The media coverage presents the University of Sharjah's achievements in the empowerment of the people with disabilities (with the awareness sustainability circle team leader)	May 27, 2019
- With your determination, we will reach high levels in the field of sustainability (with the leader of the sustainability teams, the director of the sustainability office and the members of the team regarding the people with disabilities)	April 15, 2019
- Preparing the university environment (with the leader of the sustainability teams, the director of the sustainability office)	April 7, 2019
- Diploma in sign language interpretation (with the leader of the sustainability teams, the director of the sustainability office)	April 7, 2019
- The plans of the people with disabilities track "people of determination" (with the leader of the sustainability teams, the director of the sustainability office)	February, 28 2019

- Knowledge Sessions (moderated by students with disabilities “people of determination”)

Session Subject	Session Date
<ul style="list-style-type: none"> - With your determination, we will reach high levels in the field of sustainability. The target audience is the students with disabilities. Moderated by male and female students with disabilities. 	April 23 to May 30, 2019

Fourth: Participations

Subject	Date
<ul style="list-style-type: none"> - Second Forum of Sustainability Team Leaders at the University of Sharjah 	May 1, 2019
<ul style="list-style-type: none"> - Discussion workshop with the urban planning and building management circle team 	April 7, 2019
<ul style="list-style-type: none"> - Workshop on the planned practices of agriculture 	March 20, 2019
<ul style="list-style-type: none"> - Joining the community agriculture team in the sustainable garden project 	March 20, 2019
<ul style="list-style-type: none"> - First Forum of Sustainability Team Leaders at the University of Sharjah 	February, 28 2019

Fifth: Questionnaire Development

Subject	Date
<ul style="list-style-type: none"> - A questionnaire regarding: Extent of empowerment of the people with disabilities at the University of Sharjah (a study from the student with disabilities' view point) 	May 22, 2019
<ul style="list-style-type: none"> - A questionnaire regarding: Extent of admission of the people with disabilities to the University of Sharjah 	May 22, 2019
<ul style="list-style-type: none"> - A questionnaire regarding: Extent of availability of support to the people with disabilities at the University of Sharjah in the event of emergencies and crises 	May 13, 2019
<ul style="list-style-type: none"> - A questionnaire regarding: Extent of availability of transportation services for the people with disabilities at the universities 	May 9, 2019
<ul style="list-style-type: none"> - A questionnaire regarding: Extent of availability of information technology services for the people with disabilities at the University of Sharjah 	May 9, 2019
<ul style="list-style-type: none"> - A questionnaire regarding the knowledge session, “With your determination, we will reach high levels in the field of sustainability” 	April 23, 2019

Work Team

1. Students with disabilities (male and female).
2. Faculty volunteers.
3. Staff volunteers.
4. Student volunteers (male and female).
5. Community members volunteers

6.19 Female Students Sustainability Activities Circle



Leader: Ms. Samira Mohammad Shehadeh.

Student Activities Officer

Deanship of Student Affairs

The Sustainability Office believes that one of the best means to develop sustainably is by engaging with other communities to achieve mutual benefit. The Female Students Sustainability Activities Circle was established to provide female students with the initiative to share knowledge of the approaches taken to achieve sustainability, and apply new concepts and practices taken from different communities. The female students' duties also extend to include offering community service by volunteering.

Goals

The female and male student's inter-campus engagements sustainability circles aim to:

1. Collaborate with other colleges and universities to help build campus sustainability broadly. The university can make significant contributions to sustainability by sharing their experiences and expertise with other colleges and universities.
2. Engage the students and employees in community service. Volunteerism and the sense of compassion that community services help develop are fundamental to achieve sustainability.

KPIs

The proposed KPI is being designed currently by students based on business sales models as well as social service and student affair models. The things to be considered are the following:

1. Time line scheme of all year-round activity
2. Student Count participating
3. Student Count Organizing
4. Faculty Collaboration
5. Quality Rating of the events

This KPI metric will be implemented by recording data of all such factors and then interpreting them and coming up with a way to calculate overall performance. From now on, any student event will be rated by students to gather Quality value of said events.

Current and Future Initiatives

Current Initiatives

- Clean Energy Initiative in cooperation with Sharjah Women's Society & SEWA (ongoing).
- Garden Block Work and Planning.
- Gardening opening ceremony contribution.

New Initiatives

- Introductory Meeting with Dr. Imad □ Home Gardening Workshop.
- Anti-Plastic Campaign.
- Make Your Own Tote Workshop.
- Save Energy in Your Home Workshop.

6.19.1 Sustainability Students Clubs Achievements

Student behavior and their level of awareness affects the whole university, as they are the core of the university to consolidate the concept of sustainability and raise awareness among students.

They participated in the Clean Energy Initiative 2019 with the Sharjah Women's Union Association and Sharjah Electricity and Water Authority (SEWA) through two teams of students since February and they are continuing until the end of the year, an announcement is shown in *Figure 37*.



Figure 37: Clean energy initiative 2019 with SEWA.

In implementation of the University Strategy 2019-2024

In addition, their role in raising awareness of sustainability and environment programs for students, they are in the process of implementing an intensive and targeted outreach plan for the academic year 2019/2020 that has been submitted to the Sustainability Office.

This year they started an intensive campaign targeting new students in particular and the rest of the students in general through:

- Female Students Sustainability Club members, dressed by the sustainability club vests as shown in Figure 38, distributed the ecofriendly shopping bags in the Orientation meeting for new students as a first step to raise the awareness, as shown in *Figure 39*.



Figure 38: Sustainability club vest.



Figure 39: distributing the ecofriendly shopping bags in the orientation meeting for new students.

- Establishing the Sustainability Club and announcing, as shown in *Figure 40*, it to be actively involved in the campaign's work within a systematic schedule. The students have already started to inquire and register, where we have registered now 75 freshmen students. In addition to 85 students, who registered in the club last year (in the Deanship of Student Affairs- Female)



Figure 40: Sustainability club announcement.

Sustainability Week:

The establishment of a festival or a forum induction of sustainability at the beginning of next spring semester, which includes all the circles of sustainability in addition to the implementation of workshops and lectures during this week, and its goal is to introduce students and the university family in general about sustainability and its work and open the door for registration as per their interest.

6.20 Female Students Sustainability Activities Circle



Leader: Eng. Amer A. Yousif.

Department of Industrial Engineering and Management

College of Engineering

The idea of this initiative is to develop and implement environmental, social and economic project that aims at raising the responsibility of the community towards sustainability and reducing the excessive use of resources and energies, reducing waste and relying on local plants suitable for the UAE environment. To implement sustainable development objectives, UOS adopts a sustainable garden project to change production and consumption patterns from unsustainable sources to more sustainable ones, address water and air pollution, and protect and manage natural resources to prevent desertification, environmental degradation, and degradation of biodiversity.

This initiative is based on encouraging UOS community (students, staff and faculty members) and their family members to participate and contribute to the cultivation of specific areas of the sustainable garden using modern and intelligent technologies to reduce the use of water, fertilizers and energy.

Goals of Sustainable garden

The sustainable garden project aims to:

1. Strengthen sustainability practices at the university.
2. Promote awareness of sustainability among members of the UOS community.
3. Develop a sustainable and successful project that can be used as a viable model in Sharjah.
4. Maintain and strengthen the UOS status in the global rankings in the fields of sustainable development and its commitment to clean environment standards.
5. Promote Health and Nutrition:
Create access to affordable, local, healthy and sustainable food sources for UOS residents, promote healthy living through gardening.

6. Growing Locally:

Make it easy to grow healthy food for personal use, help to ensure that we know where our food comes from, that it is grown without chemicals and that it is not genetically modified.

7. Provide Educational Opportunities:

The community garden offers both hands-on and seminars events throughout the year focused on health and nutrition, environmental stewardship, and organic gardening.

8. Strengthening the Local Community:

- Create public/private partnerships – build diverse and collaborative relationships with community organizations, and governmental entities.
- Connect people with each other, reducing isolation and creating a stronger sense of place. (Growing, eating and sharing food brings communities together.)

9. Improve quality of life:

Health, well-being & happiness by offer practical practices and educational opportunities for people of all ages. This enhances a sense of community on campus through team building and working towards a common goal.

10. Protecting the Environment:

- Protect the quality of our land, soil, air and water by eliminating the use of chemical, and fertilizers. Prevent food waste and lower our carbon footprints - reduce, reuse, recycle.
- Support public policy that will confirm support for community gardens.

KPIs

Performance indicators for the Sustainability garden simplify the task by measuring and validating both current and future progress towards a more sustainable operation. UOS has identified most critical aspects of a sustainable agricultural operation.

1. Energy Management:

There is both an economic and an environmental cost to energy usage from farming to processing.

Tracking energy usage can help to reduce costs and emissions within the operation.

2. Fertilizer Management:

Being good stewards of the land includes using the right type and amount of fertilizer, in the right place, and at the right time to ensure crop needs are satisfied.

3. Food Safety:

Food Safety is about being committed to producing the safest food possible and maintaining a consistently safe operation from field to fork.

4. Greenhouse:

Growing, harvesting and processing operations can take a proactive approach to minimize their carbon footprint by incorporating more sustainable practices into their core business strategies. Provides opportunities to cut operational costs by using fewer resources, such as energy, fuel, fertilizer, and water.

5. Soil Management and Conservation:

Healthy soil is the foundation for healthy crops. Soils do much more than simply provide water and nutrients to crops.

6. Waste Reduction and Material Management:

Reduce Reuse and Recycle. Use of raw materials, unnecessary use of energy and water, and the disposal of organic materials.

7. Water Management:

Conserving water and maintaining the quality of water leaving fields and processing plants is vitally important to fresh produce operations today.

8. Ecosystems & Biodiversity:

A successful sustainable growing operation considers the natural habitat, plants, while also adhering to food safety requirements.

Current projects and achievements

1. Workshop

The Sustainable Garden circle a workshop, as shown in *Figure 41*, for the 72 sustainable garden participants on cultivation practices. It provide information for both experienced and beginner farmers that enrich and expand their skills and knowledge as well as answer their queries.

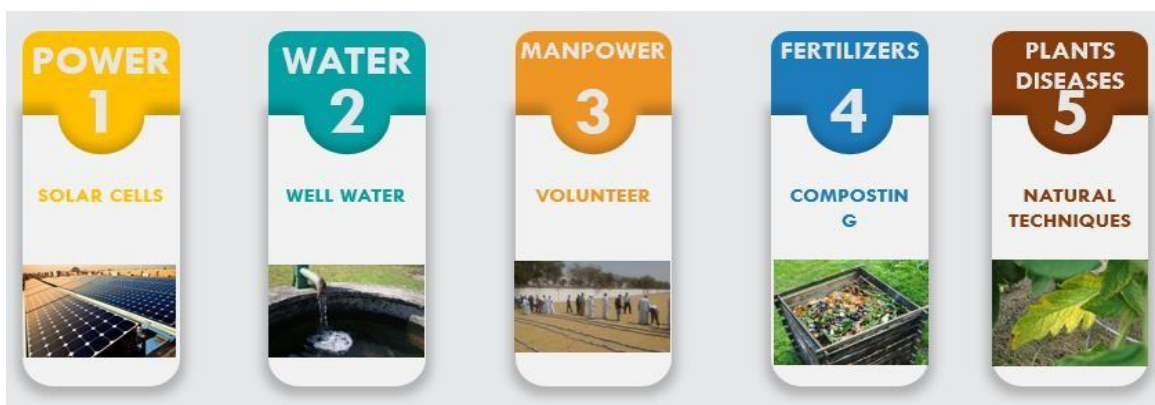


Figure 41: Workshop allocate the plots for participant.

2. Building Sustainable Garden with Sustainable solutions and techniques

Environmentally friendly alternatives are used to implement the sustainable garden in stages and based on the available funding, including:

- Solar energy as an alternative to electrical energy.
- Treated or semi-treated water for irrigation.
- Volunteers and Student projects will be used in the development of the garden sections.
- Conversion of organic materials to useful materials such as fertilizer or other.
- Natural Techniques and recycled materials will be used for building what it takes to equip the garden.



3. Components of the sustainable garden

- A. Local Plants Section
- B. Hydroponics Section
- C. Sustainable greenhouse section
- D. Medicinal Plants Section
- E. Community Farming Section

A) Local Plants Section:

Local plants in the UAE (see *Figure 42*) are known to have enormous environmental and heritage value, as our ancestors used to utilize in all aspects of life. They are also capable of tolerating all harsh environmental conditions and can live with the least amount of water.

Benefit: The use of local plants in cosmetics will help to achieve sustainable and comprehensive development, which will, in the long run, lead to the preservation of natural resources of future generations, as well as improve the ranking of the UAE by classifying the Global Environment Index.



Figure 42: Local plants.

B) Hydroponics Section:

Hydroponic is a method of growing plants without soil by using mineral nutrient solutions in a water solvent. The hydroponics are designed and manufactured by students, to strengthen their scientific aspects in community service as shown in *Figure 43*.



Figure 43: manufacturing processes of hydroponic system as part of lab course project (students & lab instructor).

The treated or semi-treated wastewater can be used to irrigate the plants, where 95% of irrigation water can be saved by hydroponic systems. A solar system is used to power the hydroponic, as shown in *Figure 44*. The final product of the hydroponic systems is illustrated in *Figure 45*. *Figure 46* shows planted vegetables by one of the faculty members in UOS.



Figure 44: Solar system for the hydroponic.



Figure 45: Hydroponic system in UOS.



Figure 46: Vegetables planted using hydroponic in USO.

C) Sustainable greenhouse section:

- Used materials are utilized for the construction of the greenhouse, mainly the columns of the greenhouse as shown in *Figure 47*. In addition, used glass is utilized in constructing the green house as shown in *Figure 48*.



Figure 47: Used materials for constructing the greenhouse.



Figure 48: Used glass for constructing the greenhouse.

- Solar system used to power the greenhouse, as shown in *Figure 49* to reduce energy consumption and to produce vegetables, sustainably.



Figure 49: Solar system to power the greenhouse.

- The constructed water tank is illustrated in *Figure 50*.



Figure 50: Water tank in the greenhouse.

D) Medicinal Plants Section:

- A specified section of the sustainable garden is dedicated to the cultivation of plants with medicinal properties, as shown in *Figure 51*.



Figure 51: Example of medicinal plants.

E) Community Farming Section:

This section is allocated to those who wish to practice free agriculture from staff and faculty members and their families in the first phase of the sustainable garden.

- An announcement was sent to all faculty and staff members through email and the university website to invite those who are interested in community farming to participate.
- A land of 15 square meters had been provided to each participant of the 72 members who applied from the faculty and staff as shown in *Figure 52*.

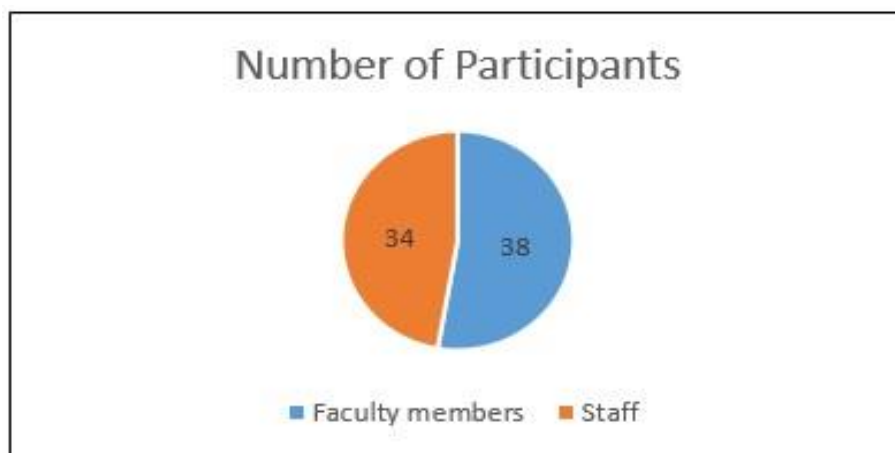


Figure 52: Participants of sustainable garden.

- The sustainable Garden Circle organized a workshop for the 72 sustainable garden participants on cultivation practices to provide information for both experienced and beginner farmers that enrich and expand their skills and knowledge as well as answer their queries.

1.1 Sustainable garden project partners

- University City of Sharjah Provided the project with workers and equipment to level the land, as shown in *Figure 53*.



Figure 53: Land levelling by University City.

- Sharjah Municipality Provided the project with sand and compost for the land based on the request of University City of Sharjah, as shown in *Figure 54* and *Figure 55*.

50000 DHS has been saved by using available sand.



Figure 54: Sand provided by Sharjah Municipality.



Figure 55: Compost provided by Sharjah Municipality.

- Sharjah Roads and Transport Authority Provided the project with used interlock as requested by the sustainability office to encourage the idea of reusing material, as shown in *Figure 56*.

160,000 DHS has been saved by re-using the defected interlocks.



Figure 56: Used interlock provided by Sharjah Roads and Transport Authority.

1.2 Water quality

Laboratory tests were conducted at the water quality lab in UOS, by the Water Science and Technology Sustainability Circle, to test the quality of water used in the sustainable garden by taking water samples. It was found that the water used in the sustainable garden has good quality.

1.3 Impact and Benefits of the project

The sustainable garden project will help in promoting and advancing the university in the global rankings as well as influencing and improving the university sustainability performance in terms following aspects, sustainability components are shown in *Figure 57*.

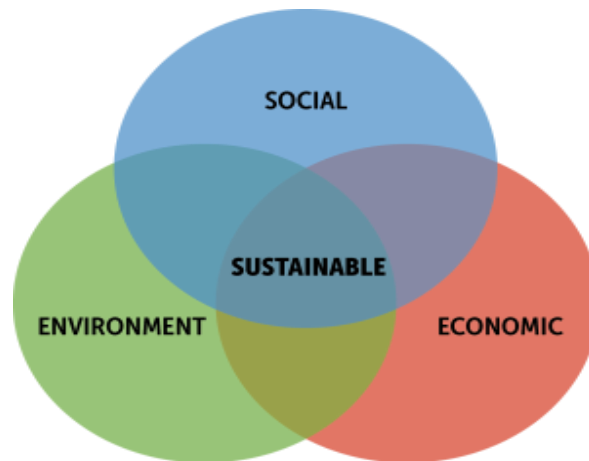


Figure 57: Components of sustainability.

Economic aspect: by applying all aspects of sustainability to the campus, the economy of the university will improve efficiently. For instance, all of the materials and equipment used in the sustainable garden project in the university are pre-used, to encourage re-using, taking into account that just the tender for the layout without the interlock for the first phase costs around 146,000 AED. However, the tender was cancelled and the construction was conducted based on reused material and voluntary work of students, staff, and other partners.



Social aspect: to improve the quality of life of people at the university as well as developing the community. For instance, including the students of the manufacturing course in the process of designing and manufacturing the hydroponic system for the sustainable garden project as shown in *Figure 58*.

Moreover, figure shows community service and volunteering work which Hands-on experience in a range of expertise, sharing enthusiasm for nature with children, Student Team Work and Family Gathering and Friends as shown in *Figure 59*.



Figure 58: the student involved in real manufacturing processes (lab work) on the hydroponic system as a part of course project.



Figure 59: Community service and volunteer work.

Environmental aspect: Recourse management and protection of the environment. It will improve the awareness of the use of sustainable practices by all stakeholders such as students. This will also promote the use of clean energy as the hydroponic system is powered by solar energy, in addition to the greenhouse and the water pump will be powered by solar system.

New initiatives

1. Involving the student in the sustainable as a volunteer or as a part of the related courses, workshops and seminars.
2. Solar system for the greenhouse, composter for the garden, water treatment station.

Students Engagement in Sustainable Garden Project:

Male students from the Man and Environment course are participating in the construction work of the sustainable garden. The female students in the same course will plant trees in the official inauguration of the garden.

Hiring students and engaging them in sustainability initiatives:

The sustainability office hires female and male students from the UOS to work on different projects and initiatives to enhance sustainability on campus.

Hosting Exchange students:

The sustainability office hosts exchange students from different countries to work on sustainability initiatives, as shown in *Figure 60*.



Figure 60: Exchange student from Sweden.

Date: Nov 1, 2019 at 5:39 PM
To: lalsyouf <lalsyouf@sharjah.ac.ae>
Cc: Aseel Att <aseel.att@gmail.com>
Subject: a long overdue message

Dear Dr. Imad and Aseel,

I hope this e-mail reaches you in the best of health and iman.

As the one year mark has passed since I joined you in the sustainability office, I wanted to send this long overdue e-mail thanking you for the months I got to spend interning for you. It was a valuable time for me, further growing my interest to work with sustainability matters.

I have been back in Stockholm for a few months now, upon finishing an internship with Enerwhere Solar in Dubai. I currently work as a consultant for Sweco, a construction/tech company. Additionally, I recently started a LEED course with USGBC, to earn a green associate certificate - hopefully one of many. I have to give thanks for the experience I have gained through my internship, as it has helped me figure out what my interests are and choose a career path, alhamdulillah.

I sincerely hope the sustainable development of UoS is prospering, as goes for the projects I had the pleasure in assisting. Tack så mycket! :)

Kind regards,
Asra Bakar

Figure 61: Email from exchange student.

- Dr. Chaouki Ghenai, Dr. Tareq Salameh and Dr. Adel Merabet received a best paper award, as shown in *Figure 62*, for their paper entitled "Design, Optimization and Control of Standalone Solar PV/ Fuel Cell Hybrid Power System." In Morocco, 2017.



Figure 62: Best Paper Award.

- 6th Cycle Sharjah Sustainability Award: The University of Sharjah has been awarded the best outstanding campus in the domain for Green Campus in the 6th Cycle 2017-2018 Sharjah Sustainability Award, as shown in *Figure 63*.



Figure 63: Winning Sharjah Sustainability Award.

- Dubai Award for Sustainable Transport: students from the sustainable and renewable energy engineering won the best student project award in the eleventh edition of the Dubai Award for Sustainable Transport in 2018.
- In addition, UOS won the best academic institution supportive of sustainability award, as shown in *Figure 64*.



Figure 64: Winning two awards in Dubai Award for Sustainable Transport 2018.

- 7th Sharjah Sustainability Award: students from the sustainable and renewable energy engineering won the 1st place in Sharjah Environmental & Protected Area Authority, as shown in *Figure 65*.



Figure 65: Design of Solar PV Power System Integrated with Desalination Unit for Floating Agriculture Farm in the Sea.

9. The Sustainability Awareness Year 2020

The Sustainability Office has announced the year of 2020 as a sustainability year, see Figure 66, under the theme of Sustainability 2020, in order to enhance and promote the concept of sustainability among.

During the Sustainability 2020 awareness campaign, each sustainability circle will coordinate activities including workshops and seminars, to create awareness and to promote and cultivate an eco friendly behaviors among the UOS stakeholders.

The UOS stakeholders, and therefore to embed sustainability into the culture and traditions of the University community.



Figure 66: Inauguration of the Sustainability Year 2020 Awareness Campaign Event.

