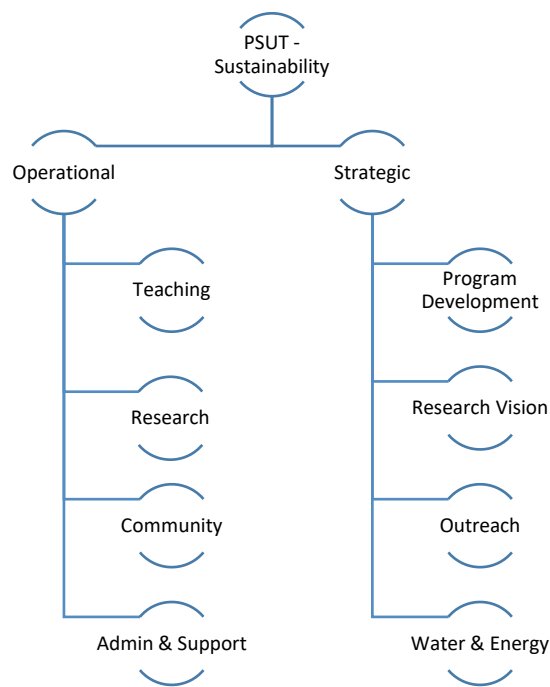


Sustainability at Princess Sumaya University for Technology (PSUT)

Sustainability at PSUT is seamlessly integrated within the mission, objectives and policies of the institute and its colleges and administrative units. The PSUT **Sustainability Statement** sets forth the link between the university mission and sustainability at social, environmental and economic levels. Academic and administrative operations at PSUT are subject to the set of guidelines and policies that support sustainability in all activities that take place on and beyond campus. The strategic planning and mission of the institute and all its academic and administrative units are consistent with a vision of sustainability and social responsibility for future generations.

The sustainability policies within PSUT cover a range of academic and administrative aspects according to two broad categories: **i) Operational**, including: Academic, Research and Services, and **ii) Strategic Planning**, including development of current programs or design of new ones both at academic, management and administrative levels.



1. Operational

i. Teaching

From the outset, the design of all programs within PSUT academic colleges has been in accordance with set standards both locally and internationally. The programs at undergraduate and postgraduate levels have included at program level, or course level essential academic units that give rise to contemporary environmental, water, energy & community issues to increase student awareness of these issues and foster an inherently aware attitude in students as they prepare to go into further studies or careers in their respective industries and communities.

Policy Statement:

To embed the requirements necessary to increase awareness of students of matters related to the environment, clean water and renewable energy in curriculum design at university, college and program levels and to develop the necessary metrics to assess student attainment rates in these areas.

Performance Indicators:

- Commitment to Community and the Environment by Students – Manifested through several metrics including community service, projects and presentations and utilization of provided services such as subsidized public transport.
- Relative Reduction in Energy, Water and Material Consumption on Campus
- Utilization of cutting-edge digital technology that supplements traditional paper-based material, e.g., Moodle

Challenges:

- Curriculum Design and Licensing is subject to local and international standards that restrict credit hours, knowledge domains and course duration
- Regional Social Stigma that gives the environment and sustainability a low priority below social, financial and health security
- Training and Development overhead for academic and administrative staff

In Practice:

Over the past 5 years, especially as programs at PSUT are achieving local and international recognition and accreditation, there is notable focus in teaching, capstone projects and university requirements on sustainability and the environment. This is set to increase further with the strategic vision of PSUT

ii. Research

Over the past 5 years, there has been a noteworthy increase in PSUT research activity that targets energy, water and environmental issues. The latest statistics show ratios between 3% and 12% of all research steering towards these contemporary issues with more focus forthcoming in the near future.

Policy Statement:

To encourage research collaboration within and beyond PSUT with special emphasis on the application of Computing, Engineering and Business technologies in the domains of the environment, water and clean energy.

Performance Indicators:

- Ratio of published articles by PSUT staff in the areas set in the policy statement.
- Expenditure rates from overall research budget on sustainability topics.
- Active participation or hosting of discussions, conferences and MoUs as a direct link to ongoing research in sustainability and environmental topics.
- Number of awards by PSUT researchers from environmental organizations such as the UNEP and EoSD.

Challenges:

- Main academic colleges at PSUT specializing in Computing, Engineering and Business
- Research funding, increments are forthcoming but fall short especially for non-core topics per the three academic colleges
- Research in the environment and sustainability is necessarily focused in the application of technology to the domain rather than within the core domain

In Practice:

Research in this very important area is served modestly within PSUT but constitutes a critical milestone in strategic planning due to regional environmental factors. Therefore, focus, expenditure and participation in sustainability and environmental research is set to increase many folds over coming academic years.

iii. Community & Industry Service

The number of forums, groups, MoUs and collaborative agreements that PSUT participates in is disproportionately large for a university of PSUT size. The focus of most of these tends to be on academic and research collaboration with joint programs at undergraduate and graduate levels including joint/dual degrees, research and academic faculty exchange as well as joint sponsorships/hosting of academic and research conferences to name but a few.

Policy Statement:

To continually seek collaborative agreements with regional and international organizations that give rise to awareness and positive action in environmental and sustainability domains.

Performance Indicators:

- Number of agreements and collaborative initiatives with Environmental agencies.
- Impact on Academic activities of such initiatives, e.g., curriculum redesign, new modules/programs.
- Research output increments and research collaborations with international organizations.
- Positive increment in community and environmental services.
- Effective change in support services within PSUT campus.

Challenges:

- The inherent lag between collaborations and implemented, effective changes.
- Restrictions on curriculum design and change (see Teaching above).
- Diminished returns past the initial phase of effective change

In Practice:

Over the past three years, with the environmental and geopolitical changes that are accelerating internationally and regionally, PSUT has shifted focus to increased environmental and sustainable collaborations with local and international organizations with more to be added as part of the strategic planning and vision for the next 3 to 5 years.

iv. Administrative & Support Services

PSUT places great emphasis on the provision of support services that conform to modern developments in sustainability, renewable & clean energy with minimal consumption of water and natural resources.

Policy Statement:

To reduce dependence on fossil fuel based energy, and natural resources year on year for all operational tasks within PSUT campus.

Performance Indicators:

- Number of schemes/Initiatives that help conserve energy and recycle natural resources.
- Utility Expenditure including electricity, fuel and water.
- Ratio of training in environment and sustainability for administrative staff.
- Ratio of PV-to-Overall electricity consumption.
- Total green areas on campus and Energy/Water cost thereof.

Challenges:

- Cultural, personal social habitual behavior with respect to energy, water and natural resources.
- Budgetary limitations of upfront costs for PV farms and water recycling facilities
- Geographical /Area restrictions on Al-Jubayha campus
- Age of infrastructure and buildings/facilities

In Practice:

Programs are effectively applied to increase green areas, encourage public transport, conserve energy, reduce and recycle waste, increase solar panel utilization and use fewer water and natural resources.

2. Strategic

The PSUT vision and strategic plan are formulated with many facets that also incorporate a continued commitment to sustainable development in all aspects of university life. This plan divides PSUT commitment to sustainable planning and development into the categories described below.

i. Academic Program Development

All academic programs at PSUT incorporate sustainable development of curriculum and delivery modes within their strategic plans for the next 3 to 5 years such that they can capitalize on experiences gained from the past few years in combination with developments within partner institutes as well as international organizations recommendations on sustainable program development.

Policy Statement:

To capitalize on experiences gained in sustainable program structure and delivery as well as incorporate best practices from partner organizations and international environmental and sustainability agencies including UNEP and EoSD in future program and curriculum design.

Performance Indicators:

- International Environmental Agency Accreditation
- Increment in Sustainability and Environmental awareness in senior students compared to junior students
- Volunteer & Community Service hours per student per semester (Average)
- Environment/Sustainability topics/credits as a ratio of University Requirements credits
- Turn-Key flexibility and ability of program design to cope with rapid changes - external and internal.

Challenges:

- Program design and structure are subject to specific local, and international Body of Knowledge and Knowledge Domain requirements, e.g., ACM, ABET.
- Study plan phased-in change lag – typically 4 years
- Skills and Retraining of faculty and staff, monetary and time costs
- Cultural and Social stigma for Sustainability and Environmental issues – Elective module selection

In Practice:

Strategic planning to incorporate sustainable development and environmental awareness within University Core Requirements is already underway with curriculum changes due for implementation over the next academic year and a monitoring/assessment system to gauge the impact of these changes also set to be implemented in parallel.

ii. Research Vision

Research in sustainability plays a pivotal role in setting the scene for operational and strategic plans of academic and administrative units by highlighting latest scholarly developments in this area.

Policy Statement:

The Research Deanship at PSUT will incorporate sustainability and environmental awareness research in its targets for the next 24 months in cooperation with the academic colleges. This is to increase applied and theoretical research in these areas especially with international partners and collaborators.

Performance Indicators:

- Hosted conferences and discussions (or online) that specialize in sustainability and the environment.
- Local and International conference participation in the area of sustainability and the environment.
- Increment in scholarly articles in sustainability and the environment.
- Increment in funding for scholarly activities in sustainability and the environment.
- University international research ranking in specialist area

Challenges:

- Limited list of research journals specializing in sustainability and the environment and yet satisfy Impact Factor and Domain requirements by academics.
- Effecting interest shift by faculties with preset specialties in engineering and computing.
- Funding restrictions and lack of viable, local funding resources to foster research in sustainability and the environment.

In Practice:

PSUT research has increased many folds over the past 3 years with the shifts in priorities at university colleges and staff levels. This increment has included excellent number of articles in energy, waste management and sustainability. The effects of the research vision are expected to introduce strong increments compared to the status quo.

iii. Community Outreach

PSUT constitutes an integral member of a group of organizations that also include the Royal Scientific Society of Jordan (RSS) which is positively active in forging links and agreements for collaboration and cooperation in the scientific and engineering aspects that give rise to better environmental awareness and increased utilization of renewable energy and water resources.

Policy Statement:

PSUT will continue its collaboration with RSS to seek MoUs and affiliations with organizations in Jordan and abroad that specialize in increasing awareness and applying technology to give rise to an environmentally friendly and sustainable way of life for all PSUT stakeholders.

Performance Indicators:

- Agreements with local and international Environment and Sustainability specialist organizations.
- Awards and grants obtained for cooperation and collaboration in sustainability and the environment.
- Community engagement and awareness projects and initiatives that are implemented locally and regionally.
- Expenditure as a ratio of turnover on community, environment and sustainability outreach initiatives.
- Rate of support for recommendations and initiatives from Management and Finance.
- Projects, products and services introduced as a direct result agreements with local and international organizations.

Challenges:

- Unforeseen external factors that affect group activities and meetings – e.g., Corona
- Data Acquisition for precise impact assessment
- Financial resources

In Practice:

PSUT is positively active with its RSS affiliation in MoUs and collaborations with local and international organizations that support sustainable development in daily lives of groups and individuals. These are set to increase many folds despite the special circumstances that the world is subject to currently which are also set to remain a factor over the next few months at least.

iv. Water & Energy

Because Jordan is one of the poorest countries in the region in water resources and because in contrast to all surrounding nations there are little or no oil and gas resources in the country, water and energy conservation policies are becoming pivotal elements in the strategic vision of the government, public and private organizations.

Policy Statement:

To maximize utilization of renewable energy sources and water conservation and recycling through the application of latest technological developments as per government initiatives and guidelines as well as from regional and international partners.

Performance Indicators:

- PSUT award for innovative solutions to conserve energy and water.
- Year-on-year increments in energy and water conservation for all operations.
- Adherence and consistency with government and international guidelines for water and energy conservation.
- Investment as a ratio of operational budget in alternative, renewable energy and water conservation.
- Utilization of initiatives and cutting edge solutions from government, local or international partners for water and energy conservation

Challenges:

- Slow rate of realization for government vision, policies and initiatives
- Discrepancy of Jordan geography compared to international partners
- Financial resources for R & D and slow RoI realization
- Cultural/Social awareness of the strategic value of clean energy and water conservation
- Mismatch between core requirements in the field and specialization areas of PSUT academic programs – Engineering, Computing & Business Technology

In Practice:

PSUT is making tremendous strides in this area with partnerships with RSS as well as other organizations to increase investment in clean energy and water conservation. This is manifested through increased agreements and partnerships as well as reductions year-on-year in energy bills through PV sources and schemes to utilize recycled water sources to water green areas. Colleges are shifting focus in capstone and research projects to the environment and sustainability with focused or collaborative projects at undergraduate and graduate levels.

Princess Sumaya University for Technology (PSUT) – Sustainability Statement

Princess Sumaya University for Technology mission to be attained responsibly by carrying out its academic and non-academic activities in a manner that achieves a balance between the Triple Bottom Line dimensions of sustainability (i.e. social, environmental and economic).

The mission of PSUT is to “conduct world-class research and creative activities that develop knowledge; preparing highly competent qualified graduates, thus contributing to the economic growth and social advancement of Jordan”.

The practical implications of this mission include the advancement of learning through teaching, scholarship and service to society by offering to our outstanding undergraduate and graduate students the best education available, by conducting scholarly ‘applied-based’ research activities judged to be excellent when measured against the best international academic practices, and by providing service to society in a way that meets principles of sustainability.

PSUT desires to achieve the highest possible standards of sustainability on its campus and in its day-to-day activities through its academic practices, in operational facilities and other related operations, and by activities provided under community’s engagement.

To this end, PSUT adopted the following activities and initiatives:

- Fostering knowledge and inquiry about sustainability through teaching, learning, and research. This includes supervising many research projects and master theses in subjects related to sustainability practices and disclosure produced by the Jordanian businesses. Additionally, modules related to renewable energy were created within our educational programs (e.g. B.Sc. in Electrical Power and Energy Engineering, <http://www.psut.edu.jo/content/curriculum-10>);
- Sharing knowledge to raise awareness and ensure effective participation of PSUT’s community in the implementation of sustainable practices;
- Promoting health, safety and occupational code of conduct for the PSUT community in cooperation with the Royal Scientific Society (RSS);
- Minimizing the use and consumption of energy through utilizing Environmental-Friendly power generation technologies (PV solar system); and increasing usage of electric and hybrid vehicles for transportation purposes;
- Adopting paper use policy that implies decreasing paper usage and promoting e-documentation/communication culture;
- Investing in green-campus infrastructures through increasing green area;
- Adopting and implementing institutional waste recycling policy in all our premises; and
- Providing annual reports of our key achievements on sustainability to PSUT’s stakeholders.