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**Centers for Advanced Studies in Water**



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# REVIEW

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## Partnering Universities



**MEHRAN UNIVERSITY**  
of Engineering & Technology  
Jamshoro, Sindh, Pakistan



## Students Graduate from USPCAS-W

### Experts should find out solutions to problems of water shortage, clean drinking water, sea intrusion, polluted and poisonous water: Chief Minister Sindh

Second graduation ceremony of USPCAS-W held on 8th March was 5th session of 22nd Convocation of Mehran University of Engineering and Technology Jamshoro. Chief Minister of Sindh Syed Murad Ali Shah was the chief guest and U.S. Consul General JoAnne Wagner and Prof. Dr. Steven Burian were the guests of honor on the occasion.



Syed Murad Ali Shah congratulated the graduates and wished them best of luck for their careers in the practical field. He also appreciated the efforts of USPCAS-W administration, faculty and other stakeholders for playing effective role in the society in respect to water related issues. The Chief Minister expressed his appreciation for USAID support and thanked the people of the United States for supporting education and health projects in the province.

While addressing the ceremony U.S. Consul General JoAnne Wagner said that with your newly acquired skills and knowledge you are ready to make important contributions to enhance access to clean water, sanitation, and proper hygiene; protect water-related ecosystems, and help Pakistan adapt to the threats posed by water-related challenges. While motivating graduates Consul General said that make a difference and be the change that builds Pakistan's tomorrow.



Addressing the graduates Director USPCAS-W Dr. Steve J. Burian said that this Center established with the support of USA, Government of Sindh, HEC Islamabad and MUET aims high quality research and training programs to help Pakistan in addressing water security challenges. He recognized the role of USPCAS-W, MUET faculty, officials from University of UTAH and support of families towards graduates.

Vice Chancellor MUET Prof. Dr. Muhammad Aslam Uqaili said that ninety percent graduates of last batch of USPCAS-W landed jobs which was a record and urged USAID, federal and provincial governments to continue supporting the Center. Syed Murad Ali Shah accompanied by JoAnne Wagner and Dr. M. Aslam Uqaili awarded degrees amongst 38 graduates of the Center. These graduates are among the students who also participated in exchange visits at the University of Utah, USA under the program funded by the U.S. Agency for International Development (USAID).

To acknowledge the excellent performance and outstanding record in academics and research Huma Tarique of Environmental Engineering, Abdul Rehman Lund of Hydraulics, Irrigation & Drainage Engineering and Veengus Panhwar of Water Resource Management were given Certificate of Excellence.

## Dr. Steve J. Burian honored with “Sitara-e-Imtiaz”

### The highest Civilian award by President of Pakistan



Professor Dr. Steve J. Burian, Director of the U.S.-Pakistan Center for Advanced Studies in Water (USPCAS-W), from University of Utah was awarded the Sitara-e-Imtiaz (Star of Excellence), one of Pakistan's highest civilian honors by President of Pakistan in a ceremony held at President House Islamabad on March 23, 2019.

The honor signifies appreciation for Dr. Burian's continued leadership on critical water issues in the country through the USAID-funded project USPCAS-W. He was one of 127 people who received civilian awards at the ceremony in field of science, education, art, literature, fashion, culture, technology, sports and others.

Vice Chancellor MUET Dr. Aslam Uqaili gave a reception to pay tribute to Dr. Burian in recognition of the honor received by him. The ceremony was attended by top management of the University including, Deans, Professors, faculty and staff members.

## Board of Governors (BoG) meets

7th meeting of Board of Governors (BoG) of the US-Pakistan Center for Advanced Studies in Water (USPCAS-W), MUET Jamshoro was held on 28th January 2018. During the meeting overall progress of the Center was reviewed and future plans and sustainability of the Center was discussed.

The Board of Governors recently further enriched with the inclusion of eminent personalities from various universities, organizations and industries. Now the composition of BoG is as under:



- |      |                           |   |
|------|---------------------------|---|
| i    | Dr. Muhammad Aslam Uqaili | Vice Chancellor MUET                                      |
| ii   | Dr. Mujeeb –ud- Din Memon | Vice Chancellor Sindh Agriculture University Tandojam     |
| iii  | Mr. Nisar Ahmad Memon     | Senator   |
| iv   | Dr. Muhammad Asharaf      | Chairman Pakistan Council of Research in Water Resources  |
| v    | Ms. Khawar Mumtaz         | Chairperson National Commission on Status of Women        |
| vi   | Dr. Muhammad Jamal Khan   | Vice Chancellor University of Swat                        |
| vii  | Dr. Tauha Hussain Ali     | Pro Vice Chancellor MUET                                  |
| viii | Dr. Abubakar Muhammad     | Director WIT, LUMS  |
| ix   | Dr. Arjumand Nizami       | Country Director HELVETAS Swiss Intercooperation Pakistan |
| x    | Dr. Khan Muhammad Brohi   | Dean Faculty of A & CE, MUET                              |
| xi   | Dr. Abdul Waheed Umrani   | Registrar, MUET   |
| xii  | Mr. Muneer Ahmed Shaikh   | Director Finance, MUET                                    |
| xiii | Dr. Bakhshal Khan Lashari | Project Director, USPCAS-W                                |

# Executive Seminar on Industrial Wastewater Management

## Before Water Commission, approximately 4000 industries were not having water treatment plants in Sindh: Justice (Rtd) Hani Muslim

An executive seminar on Industrial Wastewater Management was organized by USPCAS-W in collaboration with University of Utah, USA on December 19, 2018. The Chairman Judicial Water Commission Justice (Rtd) Amir Hani Muslim chaired the first session of the seminar and said that in accordance with the rules & regulations the industrial units have the obligation to have the treatment plants to be treated primarily at the time of discharge.

Addressing the participants USAID Acting Mission Director Sindh and Balochistan Mark Sorensen said that USAID has always supported the research and academic activities in Pakistan to find out the way forward for the persisting problems like water, energy and agriculture. He said that the seminar will pave the way for networking, collaborative efforts and teamwork to improve the management of wastewater treatment in the province. He further added that USAID funded MUET Water Center has committed to produce the quality experts who will ultimately engage themselves to resolve the water crises in the country.

Vice-chancellor MUET Prof. Dr. Mohammad Aslam Uqaili said that four years ago USPCASW was established with the generous support of USAID and the Center is primarily producing the water experts based on the latest curricula and state-of-the-art laboratory facilities to resolve the water issues of the country including industrial wastewater treatment and reuse. Provincial Minister for Climate Change, Coastal Development, Information, Science and Technology Nawabzada Muhammad Taimor Talpur chaired 2nd session of the seminar. The minister said that to tackle any issue the focused way forward works like a torchbearer, same is needed to improve the management for wastewater treatment in the province.

Based on the discussion of the seminar, the center compiled a set of recommendations for consideration of the government and its subsidiary organizations as well as industrialists and other stakeholders for addressing the issues related to industrial wastewater management.



## Recommendations of the Seminar

- 1** Make the industrial units accountable for controlling untreated wastewater and to find out the sustainable solutions for treatment and safe disposal of effluent.
- 2** Support the environmental laws compliance for local and export purposes, through expedition in the planned installation and operation of 05 Combined Effluent Treatment Plants (CETPs) in next 2 years to support the 06 industrial zones in Karachi: 1. Korangi Industrial Area, 2. SITE Industrial Area, 3. Landhi Industrial Area, 4. F.B. Area Industrial Area, 5. North Karachi Industrial Area and 6. Super Highway Industrial Area.
- 3** Establish a mechanism for policy and institutional reforms for industrial development through the support and participation of government, industry, academia and community.
- 4** Strengthen the consultation and collaboration between stakeholders and trade associations like: KATI, LATI, S.I.T.E, and FPCCI for tackling issues on wastewater.
- 5** Government should step in to facilitate and fund identification/ development of appropriate technology for cost effective treatment of industrial wastewater.
- 6** Undertake necessary steps to improve the fragmented institutional responsibility for wastewater and optimization of the re-use of wastewater.

- 7 Identify/ develop homegrown solutions by utilizing the research expertise of organizations like the US-Pakistan Centre for Advanced Studies in Water, Mehran University Engineering and Technology, Jamshoro and other relevant organizations.
- 8 Arrange/ avail support of academia for evaluation of existing water and wastewater systems, and further recommendation for up-gradation and design of water and wastewater systems infra-structure and for capacity building of operation and maintenance staff.
- 9 Expand Sindh Environmental Protection Agency (SEPA) to district level for detailed training of staff for real time monitoring and further to develop outsourcing mechanism for environmental monitoring.
- 10 Enforce extensive public awareness campaign through print and electronic media to sensitize general public for protection and conservation of natural resources.
- 11 Encourage and support Public Private Partnership mode for construction and operation of Combined Effluent Treatment Plants (CETPs) and large wastewater treatment plants.
- 12 Ensure adequate supply of fresh water by the governmental agencies as per needs of the industrial zones.
- 13 Acquire and consolidate collection of reliable data and generate new knowledge through applied research in wastewater management to guide policy making at national, provincial and local levels.
- 14 Attach due importance to solid waste management which also causes wastewater like situation around the living areas throughout the province.
- 15 Organize periodic seminars/ forums on industrial wastewater management with a deeper research dive and involvement of selected/ relevant stakeholders.
- 16 Establish cross-sector and multi-dimensional task force focused on implementation of recommendations.



## First Ph.D. Scholars Graduated

USPCAS-W, Jamshoro has produced first 2 Doctors of Philosophy (Ph.D) who received the honor during convocation ceremony held at the Center. One Ph.D. Scholar Mr. Muhammad Wajid Ijaz of Environmental Engineering completed his research work on the topic "Predictive Modeling of Salinity Intrusion in Indus River Estuary, Pakistan" under supervision of Prof. Dr. Rasool Bux Mahar. His three research papers have been published in international journals of high impact factor and one is under review. Mr.

Wajid has been granted membership of International Water resource Association, France and opted as panelist of its task force on smart water management. Mr. Wajid's research work was reviewed and evaluated time by time by experts of University of South Carolina, USA, Chinese Academy of Sciences, HEJ-Karachi University and Environment Department Peshawar University, Pakistan.

The other Ph.D. scholar is Mr. Ghulam Shabir Solangi from Hydraulics, Irrigation and Drainage who completed his research work on topic "Impact Assessment of Seawater Intrusion on Soil, Water and Vegetation of Indus River Delta Using field & Satellite Data" under the supervision of Prof. Dr. Altaf Ali Siyal. His two research papers have been published in International Impact Factor Research Journals. Ghulam Shabir Solangi's Ph.D. was evaluated and approved by foreign experts from University of Maryland, USA and Institute of Subtropical Agriculture, Chinese Academy of Sciences, China.



## University of Utah Missions

The mission of University of Utah, USA visited USPCAS-WMUET in December 2018 and March 2019 under themes of Improving Quality of Research and Transition respectively. Along with different training workshops, the mission held meetings with project management team and Vice-chancellor MUET separately in which various matters related to governance & sustainability and transition plan of the Center were discussed. Besides; other academic and administrative matters were also discussed for further result oriented targets to be achieved in future.



The mission comprised of Dr. Mike Barber, Dr. Scott Benson, Dr. Steve Burian, Dr. Aslam Chaudhry, Dr. Josh Garn, Dr. Mallory Leetham, Dr. Windy Tanner, Dr. Jeff Ullman, and Dr. Mercedes Ward. Mission on theme of "Improving Quality of Research". conducted following activities;

- Leadership, Governance, and Sustainability & Transition Planning meetings
- Participation in 2nd Graduation Ceremony
- Meetings with BUIEMS and Lasbella University on Proposal for Balochistan Water Center
- WaSH specific experiential trainings
- Workshop on Experimental Design
- Research Group Meetings
- Workshop on Mentoring Graduate Student Writing
- Executive Seminar on Industrial Wastewater Management



## Diploma Course for Irrigation Officers

2nd diploma of officers of the irrigation department on Sediment Transport started in December 2018. The Diploma Course will span 6 months with contact hour equivalent to 15 credits of graduate level course content (225 contact hours). The course is divided into modules of focused content. Participants meet with instructors for regular lessons started in December 2018 and would conclude in July 2019. The course is comprised of four training module as; **Module-1:** fundamentals of concepts and processes, followed by two modules (**Module-2; Module-3**) on modeling and simulation techniques, and **Module-4** on field measurement and lab analyses. During reporting period three modules were successfully been completed. However; the 1st module had already been completed in December 2018.

Participants will also travel to University of Utah and Colorado State University (CSU) for Module-5. Module 5 will consist of 13 days of classroom training, site visits, tours, and meetings focused on sediment management in western United States' water infrastructure.



## Regional Training on Rehabilitation & Management of Salt-Affected Soils in the Indus Basin

A 5-Days regional training on “Rehabilitation and Management of Salt-affected Soils in the Indus Basin of Pakistan” was organized by the center in collaboration with the International Center for Biosaline Agriculture (ICBA), Dubai from 15 to 19 March, 2019.

The training was attended by 28 participants including 5 women scientists and engineers from Sindh Irrigation and Drainage Authority (SIDA), Sindh Agricultural University Tandojam, USPCAS-W, Civil Engineering Department MUET and engineers from irrigation and agriculture ministry of Afghanistan.



Dr. Asad Qureshi and Dr. Muhammad Shahid from International Center for Biosaline Agriculture, Dubai and Dr. Altaf Ali Siyal from USPCAS-W, MUET were the key Instructors of the training.

The closing ceremony of the training was attended by Dr. Muhammad Aslam Chaudhry from the University of Utah, Dr. Bakhshal Lashari and Shahid Panhwar of USPCAS-W.

## Dr. Stefano Vignudelli of National Research Council Italy conducts Training on Satellite Altimetry

The Center organized a training, entitling “Satellite Altimetry and its Hydrological Applications” in collaboration with Department of Remote Sensing and GIS, Institute of Space Technology NCRG – Karachi in November 2018. The main purpose of this course was to familiarize the candidates with the use of satellite altimetry in hydrological modeling and applications. The objective of this course was to bring together scientists, hydrologists, model developers and technical experts to share their experiences and knowledge for monitoring and managing water resources. Dr. Stefano Vignudelli of National Research Council, Pisa Italy was the lead trainer. The training course was attended by scientists, remote sensing experts, modelers, professional and technical experts in water management and students of the Center.



### Training on Commercialization of Research Projects & Academia, Industry, Government and Social Linkages

In order to promote technology commercialization and entrepreneurship, a 3-Days training on “Commercialization of Research Projects and Academia, Industry, Government and Social Linkages” was organized on 31 Jan – 2 Feb, 2019.



The training was facilitated by President and CEO Pakistan Institute of Entrepreneurship (PIE) Mr. Tahir Mehmood Chaudhary. Prof. Dr. Bhawani Shankar Chaudhary was Chief Guest in the opening session of the training. Students and faculty of USPCAS-W, MUISTD, ORIC and IEC, MUET were among the participants. During three days of training the participants were communicated about the importance of commercialization of research projects. They were trained to launch and sell their projects in the market

as national and multinational companies are always in the hunt of innovative ideas by researchers. Dr. Zeeshan Khatri, Professor Textile Engg. Department also gave a talk on last day of the workshop. The training was participated by Students and Faculty of MUET. Out of 34 participants of the workshop, 21 (62%) were women.

### Seminar on “Entrepreneurship and Development of Business Plan”



Mr. Azhar Zaheer from University of Utah, USA delivered a webinar “Entrepreneurship and Development of Business Plan” on October 04, 2018. Mr. Zaheer discussed with students the financial projection and planning for their projects. The seminar was attended by faculty members, administrative staff and students of the center.

In the second session of the seminar the faculty members of USPCAS-W interacted with Fall 2018 batch to share research maps and interest.

## Seminar on Identification of Antibiotic Resistant Bacteria in the different Source Waters of Hyderabad City and its Surroundings

A project seminar on Identification of Antibiotic Resistant Bacteria in the different Source Waters of Hyderabad City and its Surroundings was held at Center on October 12, 2018. While giving presentation on results of the project, Prof. Dr. Rasool Bux Mahar, Deputy Director of USPCAS-W and the principal investigator of the study, shared that Antibiotic Resistant Bacteria (ARB) is a global public issue today.

Dr. Zulfiqar Ali Mirani, senior scientific officer at Pakistan Council of Scientific and Industrial Research (PCSIR) Karachi office and Co-Principal Investigator of the project also shared findings of the project.

Dr. Hussain Bux Kolachi, a professor at ISRA University Hyderabad and Dr. Jeff Ullman, from University of Utah, USA also spoke on the occasion. Before the technical session, Dr. Rasool Bux Mahar welcomed the participants of the seminar and thanked U.S. Agency for International Development (USAID) for funding the project study on Identification of Antibiotic Resistant Bacteria in the different Source Waters of Hyderabad City and its Surroundings and also establishing the MUET Water Center – USPCAS-W.

Vice Chancellor MUET Prof. Dr. Mohammad Aslam Uqaili, Pro-Vice Chancellor Prof. Dr. Tauha Hussain Ali, officials from Water Sanitation Authority (WASA) Hyderabad, Public Health Engineering, Government of Sindh, civil society activists, academia, and students attended the seminar.



## Awareness Session on XDR Typhoid and its Remedial Measures



At the outbreak of extremely resistant typhoid fever in Hyderabad during March 2019, USPCAS-W organized an awareness seminar to sensitize the community at large about the causes and prevention from the spread of extremely resistant typhoid.

Alongside professors of the center, Vice-chancellor Liaquat University of Medical and Health Sciences (LUMHS) Jamshoro Prof. Dr. Bikha Ram Devrajani, District Health Officer (DHO) Hyderabad Dr. Nasreen Memon, Professor of Isra University Hyderabad Dr. Hussain Bux Kolachi, Dr. Jeff Ullman of University of Utah gave their expert views on the subject.

## Focus Group Meeting in collaboration with KATI held at Karachi

A teams of professors of the center, conducted a "Focus Group Meeting" on December 29, 2018 at Karachi in collaboration with Korangi Association Trade and Industry (KATI). Experts from textile industries were invited to discuss the critical problems associated with water/wastewater management in their respective industries. Dr. R.B Mahar and Dr. Zubair led the discussion and presented their suggestions regarding utilization of waste water/ material of industries and how to utilize them as recycling process.



## GRE Training by HEC

The Higher Education Commission (HEC) of Pakistan in collaboration with the USPCAS-W organized a series of 6 weeks training session on Graduate Record Examination (GRE) Preparation. First event of the series started from Oct 27, 2018, till Dec 04, 2018. The aim of the trainings was to prepare the potential candidates to avail PhD scholarships under PAK-US Knowledge Corridor Program.



## Dialog on Water SDG6: Challenges and Opportunities

The Center in collaboration with Oxfam/Pakistan organized a "Dialog on Water SDG6: Challenges and Opportunities" on November 13, 2018. Beside; water experts/stakeholders from different organizations, faculty and students of the Center participated in the dialog.

The purpose of the Dialog was to give serious thought to the water-related issues, understand challenges, opportunities and join hands to develop short term and long term strategies to overcome these problems in the context of Water SDGs, particularly SGD6. The dialogue involved a panel discussion consisting of the panelists Mr. Ghulam Mustafa Ujan, Dr. Najma Memon, Dr. Altaf Ali Siyal, Dr. Kamran Ansari, Dr. Zubair Ahmed, Dr. Jeff Ullman, and Dr. M. Munir Babar.

The panelists shared their viewpoints on six targets of SDG6.

Oxfam team comprised of Mr. Mohammed Qazilbash, Country Manager and Mr. Fransisco Catardo, Director International Program participated in the vent.

The panel discussion was followed by the question-answer session and dialogue was moderated by Prof. Dr. Rasool Bux Mahar.



## Consultative Seminar on Provision of Drinking Water in Urban

A consultative seminar was organized for sharing the findings & results of a research project, titled "Governance & Civic Capacity for the Provision of Drinking Water in Urban Sindh, on February 08, 2019. The research project focused on the Water Supply System of Hyderabad and Sukkur. Ms. Maha Ahmad from NUST and Mr. M. Naveed Iftikhar were the principal and co-principal investigators of the research.

Syed Mohsin Zafar, Deputy MD WASA Hyderabad participated in the seminar as Chief Guest.



## World Water Day 2019

The Center celebrated World Water Day on March 29, 2019. The theme of the day was **"Leaving no one behind"**. The event included speech and tableau competition amongst students of the Center. The speeches and tableaus contained the messages and slogans of pure drinking water, water for all and save water save life.

A panel discussion was also arranged that included faculty members comprising of Dr. Munir Babar, D. Kamran Ansari, Dr. Altaf Siyal, Ms. Uzma Imran, Dr. Jeff Ulman and Dr. Khadija Qureshi who delivered talks related to the occasion. The event was attended by faculty, students and staff members of the Center. In the end Dr. Aslam Chaudhry distributed the prizes amongst the winners of speech and tableau competitions.



## Exchange & Training Program

The exchange and scholarship training program is a central feature of the US-Pakistan Center for Advanced Studies in Water (USPCAS-W), MUET that provides an opportunity to faculty & students to visit partner universities in the United States of America.

The 8th group of students of the Center including eight females arrived back at MUET after successfully completing their Summer Exchange Training Program at the University of Utah and Colorado State University, USA from 14th August to 21st December 2018.

The 9th group of 22 students including 11 females (50%) departed for USA in January 2019 to attend the exchange training program at University of Utah and Colorado State University USA. Dr. Zubair Ahmed, Professor of the Center also left for University of Utah along with the group of students.



### Session on How to Overcome Career Barriers of Women

Women Resource Center, MUET organized an interactive session on "How to Overcome Career Barriers of Women" on 13th Feb 2019. The session was conducted by Assistant Professor, MUISTD MUET Dr. Kamleshwer Lohana. The talk started with brainstorming and open discussion on career development and counseling.

Dr. Lohana also suggested ways regarding developing women leaders in mixed gender settings and establishing best practices in creating culture wherein women can flourish. The session was attended by students and faculty members of USPCAS-W and other departments of the university.



### Chairperson National Commission on Status of Women visits WRC MUET

The Chairperson National Commission on the Status of Women (NCSW) Ms. Khawar Mumtaz discussed MUET Gender Policy and the Challenges in its implementation with faculty, students and staff of the MUET on January 28, 2019. During the meeting with different stakeholders of the university, various obstacles regarding the implementation of Gender Policy were discussed in depth. It was unanimously agreed that there is great need to disseminate the gender policy including the workplace harassment policy in the university at larger scale. Further, Ms. Mumtaz emphasized to sensitize university students, faculty and administration staff about gender equity and anti-harassment policies through different trainings and counseling sessions.



## Orientation Meeting of Females of University Organized

Women Resource Center (WRC) organized an orientation meeting of females of MUET on 23rd January 2019.

The Coordinator of WRC Ms. Raima Mehmood gave presentation on MUET gender policy and elaborated objectives of the forum. She emphasized on equal rights in every walk of life from education to profession.



## Sindh Young Girls Festival

An event for young girls of the area was organized in collaboration with Oxfam/Pakistan on December 07, 2018. The objective behind the event was pursuance of Women Leadership Development and 16 Days of Activism Campaign. Girl students of the Center, university and schools of the area participated in the event. Provincial Minister of Women Development Department Sindh Ms. Shehla Raza participated in the event as Chief Guest.



## Sports Festival

In October, Society of Water Managers organized a sport event which was participated by students, faculty and staff of the USPCAS-W. Both women and men played badminton, table tennis, tug of war, chess and other games in the event. The objective behind the event was to promote extracurricular activities and gender equity to keep the health and minds of researchers healthy and provide an enabling learning environment to both women and men.



## Researcher's Delegation at Tharparkar



A group of 3rd semester WaSH scholars from US-Pakistan Center for Advanced Studies in Water (USPCAS-W), MUET visited Tharparkar under the supervision of Dr. Ayesha Tajammul for assessing the practice of WaSH interventions in communities and school settings. The group members visited different schools and other areas for their research and assessment of the given task. The field visit was one of the elements of the course "WaSH assessment and practical management".

## Fire Safety Drill

The center arranged a training on fire safety in the building, in October 2018. Experts from OSHES Pakistan conducted the training and covered topics of fire safety, fire protection, firefighting, and role of housekeeping in fire protection. The experts gave information regarding the causes of fire and immediate efforts to be taken to avoid any loss. The training was attended by faculty, staff and students of the Center.





## U.S.-Pakistan Centers for Advanced Studies in Water Mehran University of Engineering and Technology (MUET), Jamshoro



### ADMISSIONS OPEN MS & Ph.D Fall 2019

Hydraulics, Irrigation and Drainage (HID)

Integrated Water Resources Management (IWRM)

Environmental Engineering (ENVENG)

Water, Sanitation & Health Sciences (WaSH) (MS Only)

The United States Government and the Government of Pakistan have partnered together to establish a state of the art Center for Advanced Studies in Water (USPCAS-W) at MUET Jamshoro. The Center is dedicated to resolving Pakistan's water crises through providing world class education in different water-related disciplines; undertaking applied policy research; developing specialized human resource and technological capacities; and promoting academia-industry collaboration. In preparing the next generation of water sustainability leaders, the Center encourages female students and researchers to take advantage of the opportunities being offered by the Center.

#### Program Features:

- Training and research at University of Utah for promising students
- 50% seats for female students
- Global academic linkages
- Modern teaching and research infrastructure
- Networking and internship opportunities
- Opportunity to work on applied research projects
- Career counseling for employment
- On campus child care center

**Scholarships  
are Available**

Females are strongly encouraged to apply. They will be provided additional facilities, including free accommodation.

The Center targets wide regional diversity and encourages students from economically disadvantaged groups to apply.

#### Dates to remember:

Last date to apply	14 July 2019
Entry Test	21 July 2019
Merit list	28 July 2019
Date of Registration	12 Aug to 23 Aug 2019
Orientation Day/ Start of Classes	26 Aug 2019

#### Other Important Information:

- Apply online (<http://admissions.water.muett.edu.pk>)
- A bank deposit of Rs. 1500/- in favour of account No. 0000727901894001 (HBL Sindh University Branch Jamshoro)
- Entry test locations: Jamshoro, Quetta, Peshawar, Islamabad and Multan
- Eligibility criteria: Refer prospectus

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URL: [water.muett.edu.pk](http://water.muett.edu.pk)

SO WE'RE SUPPORTING  
GLOBAL GOAL NO.



CLEAN WATER  
AND SANITATION

BY 2030 EVERYONE WILL HAVE  
SAFE WATER TO DRINK



**Chief Patron:**

**Dr. Mohammad Aslam Uqaili**  
Vice Chancellor  
MUET, Jamshoro

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**Dr. Bakhshal Lashari**  
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