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U.S.-Pakistan

Centers for Advanced Studies in Water

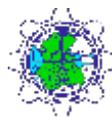


Mehran University of Engineering & Technology, Jamshoro

STUDENT HANDBOOK 2018-20

U.S.-Pakistan
Centers for Advanced Studies in Water
MUET

Partnering Universities:



MEHRAN UNIVERSITY
of Engineering & Technology
Jamshoro, Sindh, Pakistan

THE UNIVERSITY
OF UTAH

**We don't just produce Graduates
we produce Water Leaders**

Contents:

	PREAMBLE	3
	WELCOME MESSAGE BY THE VICE CHANCELLOR	4
	WELCOME MESSAGE BY THE PROJECT DIRECTOR USPCAS-W	5
1	US-PAKISTAN CENTER FOR ADVANCED STUDIES IN WATER (USPCAS-W)	6
1.1	VISION	6
1.2	MISSION	6
1.3	OVERALL OBJECTIVES	6
1.4	USPCAS-W ADMINISTRATION	7
1.5	USPCAS-W FACULTY	9
1.5.1	Visiting Faculty	13
1.6	ACADEMIC COORDINATOR	13
2	MUET – UNIVERSITY OF UTAH PARTNERSHIP	14
3	GENDER EQUITY POLICY	15
3.1	OBJECTIVES	15
3.2	TARGETS	15
3.3	GENDER EQUITY ACTION PLAN	15
3.4	GENDER EQUITY COMMITTEE	16
4	GENERAL ACADEMIC INFORMATION	16
4.1	REGISTRATION	16
4.2	ORIENTATION OF NEW STUDENTS	16
4.3	ENROLLMENT CARD	17
4.4	ACADEMIC YEAR	17
4.5	ACADEMIC CALENDAR (2016-17)	17
4.6	ACADEMIC PROGRAMS	18
4.7	BRIEF INTRODUCTION ABOUT DEGREE PROGRAMS	19
4.7.1	Hydraulics, Irrigation and Drainage (HID)	19
4.7.2	Integrated Water Resources Management (IWRM)	19
4.7.3	Environmental Engineering (EnvEng)	20
4.7.4	Water, Sanitation and Health Sciences (WaSH)	20
4.8	STUDENT FINANCIAL ASSISTANCE	20
4.9	CLASS SCHEDULE	22
4.10	CLASS ATTENDANCE	22
4.11	STUDENT EXCHANGE PROGRAM	22
4.11.1	Criteria for Student Selection for Exchange Program	23
4.11.2	Criteria for Second Opportunity of Selection for Exchange Program	24
4.11.3	Academic Activities under Student Exchange Program	24
4.12	RESEARCH FUNDING SUPPORT TO STUDENTS AT USPCAS-W	25
4.13	EXAMINATION POLICIES AND PROCEDURES	26
4.13.1	Grading System	26

Contents:

4.13.1.1	Credit Hour (C.H)	26
4.13.1.2	Quality Points (Q.P)	26
4.13.1.3	Grade Point Average (GPA)	26
4.13.1.4	Cumulative Grade Point Average (CGPA)	27
4.14	DISTRIBUTION OF MARKS FOR EACH COURSE	27
4.15	POLICIES GOVERNING ACADEMIC INTEGRITY AND PLAGIARISM	28
4.15.1	Plagiarism Policy	28
4.15.2	Plagiarism and Academic Dishonesty	29
5	POLICIES GOVERNING MS DEGREE PROGRAM	29
5.1	DURATION OF DEGREE PROGRAM	29
5.2	COURSE REQUIREMENTS	30
5.3	SCHEDULING OF COURSES UNDER DIFFERENT MS PROGRAMS	30
5.3.1	Semester-wise Courses/Research (HID Program)	30
5.3.2	Semester-wise Courses/Research (IWRM Program)	32
5.3.2.1	Pre-requisites/Refresher Courses	33
5.3.3	Semester-wise Courses/Research (EnvEng Program)	33
5.3.4	Scheduling of Courses/Research (WaSH Program)	34
5.3.4.1	Pre-requisites/Refresher Courses	35
5.4	STUDENT INTERNSHIP PROGRAM	35
5.5	APPROVAL OF RESEARCH PROPOSAL AND SUPERVISOR	36
5.6	INITIAL SEMINAR	36
5.7	FINAL SEMINAR	37
5.8	SUBMISSION OF THESIS AND CONDUCT OF VIVA VOCE EXAMINATION	38
6	POLICIES GOVERNING PHD DEGREE PROGRAM	40
6.1	DEGREE PROGRAMS OFFERED	40
6.2	DURATION OF DEGREE PROGRAM	40
6.3	COURSE REQUIREMENTS	41
6.4	SCHEDULING OF CLASSES AND RESEARCH	41
6.4.1	Schedule for 1st and 2nd Semesters	41
6.4.1.1	PhD in Hydrology, Irrigation and Drainage (HID Program)	41
6.4.1.2	PhD in Integrated Water Resources Management (IWRM Program)	42
6.4.1.3	PhD in Environmental Engineering (EnvEng Program)	43
6.4.2	Schedule for 3rd to 6th Semesters	44
6.5	GRADUATE SEMINAR	45
6.6	COMPREHENSIVE EXAM	45
6.7	APPROVAL OF RESEARCH PROPOSAL AND SUPERVISOR	46
6.8	CONDUCT OF INITIAL SEMINAR	46
6.9	CONDUCT OF PROGRESS I SEMINAR	47
6.10	CONDUCT OF PROGRESS II SEMINAR	47

Contents:

6.11	CONDUCT OF FINAL SEMINAR	47
6.12	SUBMISSION OF DISSERTATION & CONDUCT OF VIVA-VOCE EXAMINATION	48
6.13	REVIEW OF ACADEMIC POLICIES	49
7	STUDENT SERVICES AND FACILITATION	50
7.1	STUDENT-TEACHER CENTER:	50
7.2	INFORMATION AND COMMUNICATION PROCESSING CENTER:	50
7.3	RESIDENTIAL ACCOMMODATION	51
7.4	TRANSPORT	51
7.5	CAFETERIA	51
7.6	PHOTOCOPY FACILITIES	51
7.7	MEDICAL	51
7.8	SPORTS	51
7.9	LIBRARY AND ON-LINE INFORMATION CENTER	52
7.9.1	Reference Services	52
7.9.2	Book Bank Services	52
7.9.3	Lending Services	52
7.9.4	Literature Assistance Services	52
7.9.5	Book Lending Policies of the Library	53
7.9.6	Regulations Regarding the Book Bank	54
7.9.7	Conduct and Functioning of the Library	55
7.9.8	Regulations Regarding Internet Services	55
7.9.9	On-Line Information Center	55
7.9.10	Computer Labs	55
7.9.11	Account Login Policy	56
7.9.12	Discipline in Computer Labs	56
7.10	STUDENT ACTIVITIES AND ASSOCIATIONS	57
7.11	STUDENT CODE OF CONDUCT AND CARE FOR ENVIRONMENT	57
7.12	STUDENT INFORMATION SYSTEM	58
7.13	ENERGY EFFICIENCY	58
7.14	COMPLAINS OF SEXUAL HARASSMENT	58
7.15	DISCIPLINARY COMMITTEE	59
7.16	AMENDMENT TO REGULATIONS	59
	Annexure	60

PREAMBLE

The USPCAS-W Student Handbook is meant to provide information and serve as a guide for students with respect to the academic policies, procedures and MUET regulations observed for MS and PhD degree programs at the Center. This book replaces the Brief Academic Guidelines 2016-17 previously uploaded on the Center's website and now it is part of this book along with additional details and updated information about the degree programs offered by the Center. Besides, this book entails the rights and responsibilities of students and it also provides information about various services and facilities available to the students while they pursue their degree programs.

You may please note that the policies and procedures are subject to change from time to time as considered necessary by the concerned authorities for effective implementation of the overall agenda of the Center. Such changes will be notified through Center's notice boards and the website. Therefore, in addition to reading the information presented in this document, all the USPCAS-W students are encouraged to regularly visit the web site of the Center (<http://water.mueta.edu.pk/>) and check notice boards of the Center for updated information.

WELCOME MESSAGE BY THE VICE CHANCELLOR

As a Vice Chancellor of the Mehran University of Engineering & Technology (MUET) and on behalf of the administrative and academic staff of the university, I feel pleasure to welcome you wholeheartedly on your joining this university. Of so many candidates who applied for admission to the MUET postgraduate degree programs offered by the USPCAS-W, you are the lucky ones who were selected - not because of any favor but purely because of your own merit. I congratulate you on achieving this milestone in your academic career and for stepping up on the ladder of opportunity. I invite and encourage you to make full use of the wide ranging opportunities available at the MUET campus for your academic, professional and socio-cultural growth while you embark upon and navigate through various phases of your degree program.

The MUET aims to promote technological change and sustainable development through higher education, research and outreach. We aim to produce quality professionals who uphold and advance for the integrity, honor, and dignity of their profession, while taking active part in the development of the society. To this end, we will work very closely with you aiming to facilitate you in expression of your hidden potential and its utilization to avail the opportunities. Just remember that "you can't climb the ladder of success with your hands in your pockets". Struggle is the key to success. It is through your consistent hard work and focused and goal-oriented initiatives that can help you move up the ladder and accomplish the objectives of your joining this campus.

Allow me to add that we will make every effort, on our part, to make the environment conducive for learning and all the more meaningful for you. The Student Handbook that you have received is part of the effort in that direction. It equips you with necessary information about your degree program and guides you about the rules, regulations, procedures and policies as applicable. It also introduces you to various facilities and services available on the campus to make the environment conducive for learning and to enable you to reach your maximum potential. And above all, the university is committed to equal opportunity and gender balance.

In the end, let me share it with you that MUET stands as 1st in the province of Sindh and at number 6 among the public and private Engineering Universities of Pakistan according to the latest (2015) HEC ranking of the universities. Thus the quality and market relevance of our degree programs and the graduating students is highly recognized at national and international levels. For further details about MUET and its programs, please refer the university website (www.mueta.edu.pk)

I congratulate you once again on making wise decision of joining MUET and I wish you success in your academic and professional pursuits of your life.

Prof. Dr. Mohammad Aslam Uqaili
Vice Chancellor, Mehran UET

WELCOME MESSAGE BY THE PROJECT DIRECTOR USPCAS-W

I feel pleasure to extend warm welcome to you as you join the US-Pakistan Center for Advanced Studies in Water (USPCAS-W) at the Mehran University of Engineering and Technology (MUET), Jamshoro. Established recently with the support of United States Agency for International Development (USAID), it presents to you a unique learning environment entirely focused on the Pakistan's water related issues and their solution for sustained economic growth. In so doing, the Center enjoys the technical support of the University of Utah, USA in academic and capacity building programs and its growth and development as a world class center. Major areas of focus include: (a) curriculum reforms as to align it with the market needs, (b) high quality applied research and development of technologies for solving water-related problems of Pakistan, (c) training and capacity building programs to equip the graduating students with necessary knowledge and skills, and (d) to provide for sustainability by way of policy formulation and by establishing linkages with the industry and private sector organizations dealing with water. Overall mission of USPCAS-W is to train present and future faculty, young scientists, engineers, managers and other stakeholders with state of the art techniques and cutting edge knowledge in the water sector.

Irrespective of the background, gender, color, and caste, all the students joining the Center are provided financial support to enable them to focus on their studies instead of worrying about their education and living expenses. The Center works very closely with the students as to ensure enabling education environment and enriching social, cultural and extra-curricular activities.

As a partnering university, the University of Utah and its academic and professional teams work jointly with us for growth, and development of the Center and to ensure quality programs for the graduating students. Besides, the students are also provided an opportunity of spending one semester at the University of Utah or other partnering university in USA under exchange program for capacity building, applied research, and for exposure to the US education system. In essence, the Center stands for contributing solutions to Pakistan's water-related challenges by educating and training the next generation of water sustainability leaders through advanced academic training in different water-related disciplines.

I wish you success in your education program and professional enrichment during your stay with us.

Prof. Dr. Bakhshal Lashari
Project Director USPCAS-W

US-PAKISTAN CENTER FOR ADVANCED STUDIES IN WATER (USPCAS-W)

The USPCAS-W is part of a broader higher education initiative recently launched in Pakistan with financial support from the United States Government through its Agency for International Development (USAID). The objective of this initiative is to enhance the capacity of Pakistan's higher education institutions to contribute solutions to Pakistan's development challenges. As a result of this initiative, three Centers for Advanced Studies, one each in Water, Energy, and Agriculture & Food Security, have been established in four selected Pakistani universities. USPCAS-W is one of the three Centers focused on identifying and developing solutions for the multifaceted water-related challenges facing the country. The Center is housed at the MUET at Jamshoro. (<http://water.muet.edu.pk/>)

1.1 VISION

To establish a world class education and research center dedicated to solving water related problems of Pakistan and to develop strong and productive liaison with local and international organizations aiming to support Pakistan's economic development.

1.2 MISSION

To train present and future faculty, young scientists, engineers, managers and other stakeholders with state of the art techniques and cutting edge knowledge in the water sector. Through collaboration with academia, government and industry we will pursue applied research solutions to water sector problems and bring about policy reforms aiming to strengthen economy of Pakistan.

1.3 OVERALL OBJECTIVES

- Increase access for talented, economically and/or culturally disadvantaged students, in the disciplines of water;
- Establish governance structures for sustainability and improved capacity of the USPCAS-W
- Improve relevance and quality of curricula, strengthen use of effective teaching methods, and upgrade graduate programs; and
- Apply relevant research to meet client (industry, civil society, government) needs.

To achieve these objectives, the USPCAS-W will focus upon the following five main components:

To achieve these objectives, the USPCAS-W will focus upon the following five main components:

1. Governance of the USPCAS-W and the Higher Education
2. Curriculum Reform
3. High Quality Applied Research
4. Graduate and Post Graduate Training
5. Sustainability through Industry/Private Sector Links

The Center will contribute solutions to Pakistan's water-related challenges by educating and training the next generation of water sustainability leaders through advanced academic training in different water-related disciplines. The Center is dedicated to resolving Pakistan's water crises through applied research, developing specialist human resource and technologies; academia-industry collaboration; and policy formulation. The Center promotes partnerships with the academic institutions, government and the business community to seek applied research solutions that strengthen the effectiveness of policy-making and drive Innovation, Competitiveness and Economic Growth.

The mission of USPCAS-W is to train present and future faculty, young scientists, engineers, managers and other stakeholders with state of the art techniques and cutting edge knowledge in the water sector. In this program 7 labs with state of the art facilities are being established in USPCAS-W. This will assist in conducting applied research projects and forming linkages with industry and the private sector.

As a partnering institution, the University of Utah, USA will provide technical support in academic and capacity building programs of the Center for its development and growth.

The administrative and management responsibilities of USPCAS-W are looked after by the Project Management Unit (PMU) which consists of the following key personnel:

1.4 USPCAS-W ADMINISTRATION



Dr. Bakhshal Lashari, Project Director USPCAS-W (pd.uspcasw@admin.muet.edu.pk). He is PhD (Sediment Transport) from Agriculture University, Kracow, Poland and post doctorate from USA (Interdisciplinary and Integrated Approach of Agriculture Drainage in Pakistan) and Australia (Groundwater water policies and governance). Dr. Lashari has more than 36 years of working experience as an Educationist, Principal Scientist and Project Manager in water resources planning, designing and management, both nationally and globally.



Dr. Rasool Bux Mahar , Deputy Director (Academics & Research)

(dd.uspcasw@faculty.muett.edu.pk) PhD in Environmental Engineering from Tsinghua University, Peoples Republic of China. Post Doctorate from University of Utah USA.

Expertise: Identification and Characterization of antibiotic resistant bacteria and their disinfection, water and waste treatment design, removal of metals from water through nano-fibers, constructed wetland, solid waste treatment, anaerobic digestion and kinetic modeling.

Mr. Shahid Panhwar, Monitoring & Evaluation Specialist

(mes.uspcasw@admin.muett.edu.pk). He is a development professional with expertise in Project Management in general and Monitoring and Evaluation in particular. He is B.E (Civil), M.A. in Sociology and diploma in Project Management.

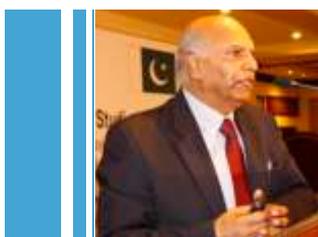


Mr. Mansoor Ali Shah, Financial & Grants Manager

(fgm.uspcasw@admin.muett.edu.pk) He is Certified Finance and Accounts Professional (ICAP), Certified Internal Control Auditor, Member of Institute of Internal Auditors U.S.A, with Master's degree in Economics. He is Specialist in Grants Management, Financial

Reporting, Internal Control Designing and Implementation and Income Tax Practitioner. He also has experience of External and Internal Auditing of various industries.

Since the University of Utah is partnering with USPCAS-W for its growth and technical support, key personnel from USA is also located at the Center. It includes:



M. Aslam Chaudhry, PhD (aslam.chaudhry@utah.edu)

Research Professor, Department of Economics

University of Utah, USA

Currently Stationed in Pakistan

Chief of Party/Deputy Project Director

US - Pakistan Center for Advanced Studies in Water

Mehran University of Engineering and Technology, Jamshoro, Pakistan

Dr. Chaudhry is an experienced Program Manager and Natural Resources Economist with expertise in developing, managing and implementing sustainable development programs in the areas of water management and agriculture development within the context of poverty reduction and climate change. His career with the United Nations Secretariat spanned over more than 23 years during which he worked as Director/Head of the United Nations Office for Sustainable Development in Incheon, Republic of Korea; Chief of Global Policy Branch of DSD/DESA; Chief of Water, Natural Resources and Small island States Branch of DSD/DESA; Senior Water Adviser at UN Secretariat; and Chief Technical Adviser of several UN executed projects and programs in developing countries. Dr. Chaudhry's work in developing countries focused on enhancing their institutional and technical capacities in water management,

agricultural and rural development, and public policy analysis for achieving internationally agreed development goals. Institutional development experience included support to the establishment of several national and international institutions and mechanisms.

Dr. Chaudhry holds a PhD in Agricultural and Natural Resources Economics from Colorado State University, USA, and is the author of several papers, chapters in books, and parliamentary reports for the UN covering different aspects of sustainable development.

Other members of the team from University of Utah pay quarterly visits to the Center to review USPCAS-W Programs and contribute to the establishment and growth of the Center by way of capacity building and by streamlining the process for achieving the objectives of the Center as envisaged.

The offices of the administrative staff are currently located in the building of the Institute of Water Resources Engineering and Management (IWREM). On completion of construction of new building of USPCAS-W in next few months, entire administrative staff and faculty will move into that building.

1.5 USPCAS-W FACULTY



Dr. Bakhshal Lashari (pd.uspcasw@admin.muet.edu.pk)

PhD in Sediment Transport from Agriculture University Krakow, Poland, Post-doctoral Fellow under Fulbright Program in Integrated Water Resources Management at Colorado State University USA, and also under Endeavour Australia Program in Groundwater Governance from the University of South Australia, Australia.

Expertise: hydrology, irrigation, drainage, water resources management, water conservation

Dr. M. Munir Babar (mmunirbabar.uspcasw@faculty.muet.edu.pk)

PhD in Computational Hydraulics from Kyoto University Japan

Expertise: open channel hydraulics, computational hydraulics, design of hydraulic structures i.e. dams, barrages, spillways and canal design, analysis of hydraulic computations of dams, energy dissipaters and



stilling basin, barrage design for surface and sub-surface flow conditions, and computer modeling of open channels and groundwater flows using FEM techniques.



Dr. Abdul Latif Qureshi (alqureshi.uspcasw@faculty.muet.edu.pk)

PhD in Hydraulics and Irrigation Engineering from Mehran University of Engineering and Technology, Pakistan

Expertise: water resources planning, optimization of water resources, surface water hydrology

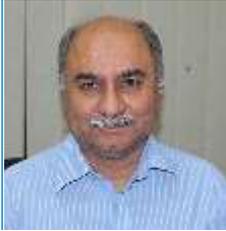
Dr. Rasool Bux Mahar (rbmahar.uspcasw@faculty.muet.edu.pk)

PhD in Environmental Engineering from Tsinghua University, Peoples Republic of China. Post Doctorate from University of Utah USA.

Expertise: Identification and Characterization of antibiotic resistant bacteria and their disinfection, water and waste treatment design,



removal of metals from water through nano-fibers, constructed wetland, solid waste treatment, anaerobic digestion and kinetic modeling.



Dr. Kamran Ansari (kansari.uspcasw@faculty.muet.edu.pk)

PhD in Open Channel Hydraulics, University of Nottingham, UK

Expertise: Open channel hydraulics, hydrology, water resources engineering, irrigation and drainage.

Dr. Altaf Ali Siyal (aasiyal.uspcasw@faculty.muet.edu.pk)

PhD in Soil and Water, Cranfield University at Silsoe, UK; Post-doctorate on 'Subsurface irrigation simulations' at USDA Salinity Lab Riverside, CA under Fulbright Fellowship Program and also post-doctorate under Australian Endeavour Research Fellowship Program in 'Soil Water and Crop Environment' from CSIRO, Townsville.

Expertise: Soil waterlogging and salinity, irrigation water management, groundwater, soil and water conservation, GIS and remote sensing.



Dr. Zubair Ahmed (zahmed.uspcasw@admin.muet.edu.pk)

PhD in Environmental Engineering from University of Science and Technology, South Korea, Post-doctoral Fellow at Sejong University, Seoul, South Korea.

Expertise: Biological wastewater treatment, application of member bioreactors for nutrient removal, anaerobic digestion, physio-chemical treatment of water & wastewater.



Dr. Arjumand Zaidi (arjumand.uspcasw@faculty.muet.edu.pk) is PhD in Information Technology from School of Information Technology, George Mason University, Fairfax, Virginia. USA.

Expertise: Dr. Zaidi is experienced in the field of environmental evaluation and decision making. Her research interests include optimization and modeling of water resources, environmental and disaster management systems. Most of her research work deals in environmental decision making with the help of various numerical techniques and Geographical Information Systems (GIS) using satellite data.

Dr. Syed Sara Hassan (sshassan.uspcasw@faculty.muett.edu.pk)

PhD in Analytical Chemistry, University of Sindh, Jamshoro, including research at Monash University, Australia

Expertise: chemistry, water quality, Water, Sanitation and Health (WaSH)



Ms. Rakhshanda Bano (rbano.uspcasw@faculty.muett.edu.pk)

M.Sc. in Environmental Science, State University of New York, USA

Expertise: Wetlands conservation, water management and human health, environmental economics, sustainable development.

Mr. Ghulam Hussain Dars (ghdaras.uspcasw@faculty.muett.edu.pk)

M.S. in Civil and Environmental Engineering, Portland State University, Oregon, USA

Expertise: Hydrology, climate change impact analysis, flood modeling, water resources engineering, water quality, GIS, project planning, IWRM



Mr. Muhammad Ali (mali.uspcasw@faculty.muett.edu.pk)

Masters Int'l Public Policy, University of Tsukuba, Japan

Expertise: public policy, economics, monitoring and evaluation, networking

Ms. Uzma Imran (uimran.uspcasw@faculty.muett.edu.pk)

Masters in Environmental Management

Expertise: Environmental Impact Assessment, environmental laws & management plans and stakeholder consultation.



Mr. Waqas Ahmed (wapathan.uspcasw@faculty.muett.edu.pk)

M.Sc. in Water Resources Engineering and Management, University of Stuttgart, Germany

Expertise: GIS and remote sensing, marine ecosystems, hydromechanics, water resource engineering



Dr. Jamil Ahmed (jamilahmed.uspcasw@faculty.muet.edu.pk)

MBBS, MPH, M.Phil. in International Health (Norway)

Expertise: Public Health in general, mother and child health & water sanitation & hygiene in particular

Dr. Naveed Ahmed (naveed.uspcasw@faculty.muet.edu.pk)

Ph.D. (Biological Environment), KNU, South Korea, Post Doc. (Nutrient Recovery)

Expertise: His research interests include biosensor development, toxicity assessment, sulfur-oxidizing bacteria, struvite recovery from swine wastewater, anaerobic digestion, and sulfur-utilized denitrification of groundwater.



Dr. Aneela Yasmin (aneela.uspcasw@faculty.muet.edu.pk)

Ph.D. (Germany), Post Doc. (Australia)

Expertise: My research interests include applications of microbiology and biotechnology for the assessment of WaSH and wastewater management.

Dr. Muhammad Rizwan (drmizwan.uspcasw@faculty.muet.edu.pk)

Ph.D. (Env.Eng & Energy) M.U. , South Korea

Expertise: My field of expertise are biofuel production and wastewater treatment. I had published 14 papers in International and national journals.



Dr. Ayesha Tajammul (ayesha.uspcasw@faculty.muet.edu.pk)

Ph.D. (Molecular Medicine) ICCBS, University of Karachi

Expertise: Her research interests include nanomedicine, environmental medicine, bioremediation of various environmental pollutants, environmental and health risk assessment, molecular biology, cell biology, immunohistochemistry and Microscopy.

Mr. Tanveer Ahmed Gadhi (tanveer.uspcasw@faculty.muet.edu.pk)

Ph.D. (Chemical Engg.) Politecnico di Torino, Italy

Expertise: My work focuses specifically on the design and development of nano materials for environmental applications.



1.5.1

Visiting Faculty

In addition to the regular faculty members, the Center hires adjunct/ visiting faculty from time to time as per requirement of the individual program and for effective implementation of the curriculum.

1.6 ACADEMIC COORDINATOR

In order to facilitate the students and faculty members in various activities of the Center in coordinated manner, the Center has appointed Academic Coordinator (academiccoordinator.uspcasw@admin.mueta.edu.pk) who has been assigned the following tasks and responsibilities:

His/ her Responsibilities

In order to facilitate the students and faculty members in various activities of the Center in coordinated manner, the Center has appointed Academic Coordinator (academiccoordinator.uspcasw@admin.mueta.edu.pk) who has been assigned the following tasks and responsibilities:

- Facilitate logistics of Graduate Seminars and Field visits
- Prepare and update the time table of each Section/Program in consultation with Section In-Charges;
- Maintain attendance record of all students (including their attendance in Graduate Seminars, Field Trips) and share with the concerned heads on monthly basis;
- Facilitate the faculty and students in arranging institutional co-curricular activities.
- Facilitate coordination among faculty, administration and students. This involves information sharing, collection of research proposals, calling for meetings etc.
- Develop and manage database of USPCAS-W students and faculty
- He/ she will be reporting to the Deputy Director USPCAS-W

MUET – UNIVERSITY OF UTAH PARTNERSHIP

The University of Utah (UU), USA (www.water.utah.edu), has been selected by USAID as the technical assistance partner of MUET for advancing the development and growth of US USPCAS-W. As the state's flagship university, the UU offers more than 100 undergraduate majors and more than 92 graduate degree programs. With a long running tradition of academic and research excellence, the UU has long been involved in a range of projects reaching across the globe.

Key organizational strengths of UU include: capacity building and international development, institutional development, change management, technology and venture commercialization, curriculum development and reform, research productivity, research infrastructure building, data modeling and analysis, effective teaching and training, distance education, global engagement and sustainability.

The MUET-UU partnership covers the following areas of cooperation: curriculum development, applied research, training, exchanges, governance, and cross-cutting issues (gender empowerment, outreach and networking, fundraising, technology commercialization, and institutional sustainability).

Under the USPCAS-W project, many of the promising MUET's post graduate students and faculty will have the opportunity to benefit from the most modern teaching and research infrastructure and experienced faculty available at the UU. More than 50 faculty members are engaged in research on water related issues from different disciplinary perspectives, especially urban water, wastewater treatment, sanitation and health, and law and policy. Many of these faculty members are directly engaged in supporting USPCAS-W activities at MUET, especially with regard to curriculum advancement, strengthening research capacities and infrastructure, and capacity building of MUET faculty.

To support MUET in establishing a world-class center for research and education on water resources management, the UU has set up several committees and thematic working groups. A team of professionals/ faculty members of high standing drawn from UU as well as from four partner institutions representing key fields relevant to the study of water resources are contributing to the work of these committees and working groups. The UU has also designed a Peer Teacher Partnering (PTP) program to train the trainers. It connects MUET faculty to UU faculty for seeking support in the design and delivery of courses and research projects.

As a part of MUET-UU partnership, faculty as well as student exchange visits to UU and other partnering institutions have already started. For details about student exchange program, please refer Section 4.11. List of UU faculty involved in supporting MUET USPCAS-W can be found at <http://water.utah.edu/uspcasw/about-us/team/>.

03

GENDER EQUITY POLICY

One of the USPCASW's main goal and crosscutting strategy is to achieve gender equity in the program. It is demonstrated in the policy statement as under:

“A highly professional and country level leading Center for Advanced Studies in Water (USPCAS-W) must adopt an active policy of equality between women and men; and a recruiting and admission policy that results in diversity and that ensures equal rights”.

3.1 OBJECTIVES

- ❑ Promote diversity and inclusiveness amongst its faculty, students and staff;
- ❑ Support women and girls in the realization of their full human rights; and
- ❑ Reduce gender inequalities in access to research and education related resources and benefits

3.2 TARGETS

Gender equity is a key strategic direction for USPCAS-W which aims to achieve the following three targets:

- ❑ Ensuring 50% share of women in recruitment, increase share of women in faculty and non-faculty positions.
- ❑ Ensuring 50% share of women in new admissions to USPCAS-W programs.
- ❑ Establishing institutions and policies that make gender equity a well understood and effectively implemented management priority with in Center.

3.3 GENDER EQUITY ACTION PLAN

- ❑ With the help of University of Utah, prepare policy recommendation on gender equity.
- ❑ Designing and recruitment of implementation programs.
- ❑ All advertisements for hiring of faculty and non-faculty positions clearly mention “women are strongly encouraged to apply”. To promote gender equity the project provides additional incentives, including standard accommodation facilities for women.
- ❑ Outreach and other activities to create better gender balance for all study programs.
- ❑ Accommodation and transport for staff and students.
- ❑ Opportunity for female faculty members in US exchange program.
- ❑ Provision of research grants.
- ❑ Managers, faculty, employee, and students familiarized on Gender Equity and Sexual Harassment Policy.
- ❑ Implement support for women in program to help retention and empowerment.
- ❑ Gender balance in new admissions.

While drawing and implementing gender equity action plans of the Center, MUET gender policy principles (<http://www.mueta.edu.pk/circulars-notifications/gender-policy-statement>) will serve as a key guiding document for all gender related activities.

3.4 GENDER EQUITY COMMITTEE

For effective implementation of the gender policy principles, the Center has appointed a Gender Equity Committee with Ms. Uzma Imran acting as a Focal Person (uimran.uspcasw@faculty.mueta.edu.pk). The Gender Equity Committee is the custodian of the gender policy principles document and is on a driving seat to ensure its implementation in letter and spirit through supporting institutional efforts for translating policy principles into concrete actions.

04

GENERAL ACADEMIC INFORMATION

4.1 REGISTRATION

- ❑ All the students selected for MS/PhD Programs shall receive a provisional admission letter from USPCAS-W admission office. They are required to fill-in a Registration Form (**Annex I**) and submit it to the admissions office of the Center by the due date mentioned in the provisional admission letter.
- ❑ The selected students are also required to execute a surety bond/ undertaking with the USPCAS-W (the specimen is provided in this handbook as **Annex-II**) regarding the terms of availing financial support while pursuing their respective degree programs.
- ❑ Both the above formalities are to be completed by the deadline mentioned in the provisional admission letter.
- ❑ The students failing to register by due date will not be allowed to attend the classes.

4.2 ORIENTATION OF NEW STUDENTS

Orientation of new students covering program details, center policies, and supporting facilities and services available to the students is conducted on the first day of the Fall Semester as specified in the Academic Calendar under the Section 4.5. During this session, the students are given comprehensive information about the academic programs, center's policies, supporting facilities and services available to the students. Besides, the students are also taken around the MUET campus to acquaint them about the location of various

administrative offices, class rooms, laboratories, and library and brief them about various facilities and services.

It is during the orientation session that all the students are facilitated and asked to fill-in the following forms as to enable them to avail various university facilities and services:

- Smart Student ID Card Registration Form **(Annex III)**
- Email Account Request Form **(Annex IV)**
- Internet Access Request Form **(Annex V)**
- Library Membership Form **(Annex VI)**
- Microsoft Academic Alliance (Dream Spark) Account Request Form **(Annex VII)**

Besides, each student should open a bank account at the Campus Branch of Habib Bank Limited and communicate their account numbers to the Financial and Grants Manager of the Center (fgm.uspcasw@admin.muet.edu.pk) for deposit of their monthly stipends in the respective accounts.

4.3 ENROLLMENT CARD

In addition to the items listed under Section 4.2, all students should also apply for Enrollment Card **(Annex VIII)** in order to fulfil university requirement for being enrolled student.

4.4 ACADEMIC YEAR

There shall be two semesters in an academic year. The Fall Semester starts in August and Spring Semester starts in January each year. The duration of teaching time in each semester shall be 16 weeks which includes conduct of tests/quizzes and a mid-semester exam. There will be a semester break of one week to ten days between the Fall and Spring semesters. Minimum number of contact hours for a theory subject of 3 credit hours per semester shall be 42. Similarly, for the practical/ lab session of 1 credit hour, minimum number of contact hours per semester shall also be 42. However, some refresher courses in summer semester can be squeezed in for eight weeks with the increased frequency of classes conducted during a week.

4.5 ACADEMIC CALENDAR (2018-19)

Description	Date/Timeline
Last date to apply	03.11.2017
Entry Test	26.11.2017
Merit List	03.12.2017
Date of Registration	01-12.01.2018
Orientation Day/Start of Classes	15.01.2018

1st Semester (Course Work only)	
Classes start	15.01.2018
Classes end	04.05.2018
Examinations start	21.05.2018
Semester Break	04.06.2018 to 19.08.2018

2nd Semester (Course Work and Internship)	
Classes start	20.08.2018
Classes end	07.12.2018
Examinations start	26.12.2018
Internship for students	07.01.2019 to 13.01.2019

- PhD students complete their course work during this semester

3rd Semester (Course Work and Research)	
Classes start	14.01.2019
Classes end	03.05.2019
Examinations start	20.05.2019

- This semester may also involve exchange visit to USA University for research/training purposes for those who meet the selection criteria.
- All students start their thesis research

4th Semester	
<ul style="list-style-type: none"> ▪ MS students have to complete their research, including writing and defense of thesis. For details, please refer Section 5 of this book. ▪ PhD students are required to complete their course work during the first two semesters. Starting their research from third semester, all degree requirements including thesis research, and writing and defense of thesis are to be completed by the end of sixth semester. For details, please refer Section 6 of this book. 	

The academic calendar given above relates to the second batch students admitted to the Center in the year 2016.

The students admitted in the year 2015 (first batch) have already completed first two semesters of their degree program. They will now be joining their third semester of the degree program. Details of course work, thesis research, and other requirements for completion of degree program are detailed in the Section 5 for MS students and Section 6 for PhD students.

4.6 ACADEMIC PROGRAMS

The USPCAS-W offers Master of Science (MS) and Doctor of Philosophy (PhD) Degree Programs in the following specialized fields:

Fields for MS Degree Program (4)	Fields for PhD Degree Program (3)
○ Hydraulics, Irrigation and Drainage (HID)	○ Hydraulics, Irrigation and Drainage (HID)
○ Integrated Water Resources Management (IWRM)	○ Integrated Water Resources Management (IWRM)
○ Environmental Engineering (EnvEng)	○ Environmental Engineering (EnvEng)
○ Water, Sanitation and Health Sciences (WaSH)	

It may be noted that MS in Water, Sanitation and Health Sciences (WaSH) is a new degree program started in the year 2016. Each of the above programs is designed to build capacity of next generation of water sustainability leaders for solution of water-related issues in Pakistan. These programs also bear direct relevance to the water-related Sustainable Development Goals (SDGs) to be achieved by the year 2030. (<https://sustainabledevelopment.un.org/sdg6>)

4.7 BRIEF INTRODUCTION ABOUT DEGREE PROGRAMS

Given below is the introductory information about each of the degree programs. For details about the courses, thesis/ dissertation research and other requirements for each of the degree program, please refer Section 5 for MS and Section 6 for PhD Program.

4.7.1 Hydraulics, Irrigation and Drainage (HID)

The HID program educates students in the field of open channel and groundwater hydraulics in combination with engineering principles and to support useful plant life, with minimum degradation of soil and water resources. The primary objective is to understand soil, water and plant relationships and how they can be applied to better manage surface and groundwater resources in the production of food and fiber. HID program, especially at the post-graduate level, is structured to be interdisciplinary. In addition to increasing their understating of engineering fundamentals, students are encouraged to explore and appreciate environmental and ecological effects of irrigated agriculture. This is important since irrigated agriculture has come under increasing criticism for being a heavy user of water combined with low land and water productivity and environmental damages to soil and waterresources.

4.7.2 Integrated Water Resources Management (IWRM)

The IWRM program enhances students' knowledge and capacities to deal with multi-disciplinary aspects of water resource allocation and use under conditions of uncertainties. Key topics constituting the program include: principles of IWRM, hazard planning and management, inter-sectoral allocation and use, water governance, institutions and policies, water dispute management, water valuation, economics of water management, and GIS

and remote sensing in water resources. Given the emerging complexities in water sector, the need of coordinated decision making across sectors and scales has always been felt. IWRM provides a platform where young leaders are trained in interdisciplinary concepts and methods for integrated water resources management to meet the complex sustainability challenges.

4.7.3 Environmental Engineering (EnvEng)

The EnvEng program focuses on the fundamental and applied understanding of the processes which govern natural and engineered treatment systems and the effects that they have on human and ecosystem health. This program emphasizes learning in conventional environmental engineering, physical chemical and biological processes, water quality management, water and wastewater treatment design, air and noise pollution control, hazardous and solid waste management, and environmental impact assessment. The program offers both MS and PhD degrees in Environmental Engineering.

4.7.4 Water, Sanitation and Health Sciences (WaSH)

In contrast to most 'traditional' degrees in environmental engineering, individuals in this program will need to have the knowledge, skills and attitudes to assess the needs of a community, design, evaluate and implement technical solutions to the deficiencies of water supply and sanitation that are appropriate for a given community and sustainable, through a process of community engagement and mobilization, and in partnership with like-minded organizations whose focus is on health promotion and education. Individuals trained in this program will have the skills and knowledge to work effectively with community and community-based organizations and the local political structure to effectively implement water and sanitation interventions, assess the functioning and impacts of these systems, and identify and implement solutions to improve the effectiveness and sustainability of existing systems.

4.8 STUDENT FINANCIAL ASSISTANCE

The tuition fees for all USPCAS-W enrolled students in MS and PhD programs is fully paid by the center through the generous financial support of USAID as per details given in the box below:

Students enrolled in the Center will receive the following benefits:

- Full tuition fee for all semesters (4 semesters for MS students and 6 semesters for PhD students);
- A stipend of Rs.15,000 per month to cover living and accommodation costs for maximum period of 24 months for MS students and 36 months for PhD students;
- Free transport through university buses;
- Training and research opportunity at University of Utah or any of its partner university in USA for all those who meet the criteria (refer Section 4.11); and
- Female students will be provided accommodation at the campus.

The stipend is paid to all the MS and PhD students as to ensure their full attention on their education & research without worrying for their living expenses. The students are expected to maintain their full attendance on campus for their participation in academic and research activities. The financial office of the USPCAS-W reserves the right to withhold student stipend if any student is short of 90% attendance requirement. Besides, such students will not be considered for exchange visit to USA (see Section 4.11 for details)

Entitlement of fees payment by USPCAS-W is determined on the following basis:

- a) Student enrolled at the Center is a citizen of Pakistan.
- b) Student enrolled is expected to contribute in Pakistan's Water sector after completion of his/her degree.
- c) Student is a law abiding citizen.

Besides, the students enrolled in MS/PhD programs at USPCAS-W are required to meet the following criteria for regular receipt of their monthly stipends:

- 90% attendance in each course, graduate seminar, field trips and also during the research period.
- As a full time student of the Center, students are not allowed to engage themselves in any part-time or full time employment.
- The students should follow the schedule for various academic activities, research proposal formulation and its defense through Initial Seminar, writing and submission of thesis/dissertation and its defense through Final Seminar, and completion of degree within the stipulated time of 24 months for MS degree and 36 months for PhD degree (refer Sections 5 and 6 for detailed degree requirements).
- Prolonged absence and/or discontinuation of the program before completion will result in not only discontinuation of the stipend but such students will also be responsible for returning the expenditures incurred upon them in terms of fees, stipend and other expenditures during their degree program.

All students are required to sign an Undertaking (**Annex II**) to this effect latest at the time of their joining the Center after their selection for MS/PhD degree program. Students are advised to follow the terms and conditions spelled out in the Undertaking as to ensure release of their monthly stipends and to qualify for participation in the student exchange program jointly administered by USPCAS-W and the University of Utah, USA.

4.9 CLASS SCHEDULE

- Class schedule is included in the admission folder provided to students on registration day or during the induction week. The schedule shall also be displayed on USPCAS-W information board and website (www.water.muet.edu.pk) for access of the students.
- All classes at USPCAS-W are scheduled for sixteen week semester for Fall and Spring semesters.
- The classes at USPCAS-W are conducted four days a week from Monday to Thursday. However, Fridays are reserved for Seminars, and for field/ study visits of the students and faculty.
- For every 3 credit hour course, classes shall be conducted twice a week comprising 1.5 hours each. For each practical/lab class of 1 credit hour, the class time duration will be 3-hour per week. It will all be reflected in the class schedule provided to students at the time of registration.
- For any further questions/ clarifications regarding the class schedule, class attendance, and other academic activities, students are advised to contact Academic Coordinator (academiccoordinator.uspcasw@admin.muet.edu.pk)

4.10 CLASS ATTENDANCE

- All students are required to maintain 90% attendance in each course in order to qualify for (i) receiving the monthly stipend and (ii) for participation in the exchange program.
- The 90% attendance requirement is also necessary to qualify for appearing in the final examination of the semester. However, a condonation in attendance to the extent of 15% for the purpose of appearing in the final semester exam can be considered only in genuine cases and under unusual circumstances. The concerned student shall apply with justification for low attendance to the Director USPCAS-W in writing who will refer the case to the Committee specifically constituted for this purpose. If satisfied with the reasons for low attendance, the Committee will recommend the matter to the Vice Chancellor for final approval.
- Late arrival in class is highly discouraged and must be avoided.

4.11 STUDENT EXCHANGE PROGRAM

- USPCAS-W is working in partnership with University of Utah, USA. One of the University of Utah academic components is 'Student Exchange Program'.
- The exchange program is fully funded by USPCAS-W and University of Utah, USA.
- The students meeting the criteria (see Section 4.11.1) shall get opportunity of studying one semester program at University of Utah, USA.
- Students' selection for the Exchange Program is separately administered with Partner University and USPCAS-W.
- The exchange program is open to MS and PhD students enrolled in USPCAS-W.
- Academic Criteria for selection of students for exchange program are regularly revised and updated by USPCAS-W and partnering universities.

- Generally students are selected for their third semester studies keeping in view students' attendance in classes, academic records, research proposals, statement of purpose and multiple behavioral assessments. Details about these criteria are given in the next section.
- Students on exchange program will get enhanced monthly stipends to meet their daily expenses at partner university. However, students will not claim their stipend in Pakistan for the period of their stay at the partner university.
- Students' selection in exchange program does not constitute a guarantee for Visa issuance by the concerned agency. However, all supporting documents shall be provided and possible support shall be provided for visa application.
- It is imperative to understand that visa process is independent of any influence and that all visa decisions are done by the Visa Office in order of merit and applicable policies for issue of J-1 Visa.
- Students selected for exchange program but refused or delayed grant of visa may lose their opportunity to attend exchange program. However, such students may apply for next opportunity and decision shall be taken on the basis of merit while reviewing student's overall status of the degree program (see Section 4.11.2).
- The exchange program shall support for return ticket, health insurance, accommodation, food and living allowance for the period of exchange program.
- Expenses incurred other than agreed shall be borne by student and no claim can be entertained in such cases.

4.11.1 Criteria for Student Selection for Exchange Program

Student selection for participation in the exchange program is done after their completion of first two semesters of course work on the basis of following criteria.

S. No.	Criteria	Weightage (%)
01	Average of the grades/marks in the first two semesters – at least 80%.	40
02	Average of the percentage of classes attended in the courses (first two semesters), graduate seminars, and field visits grading out of 100 – at least 90%.	15
03	Research proposal grading out of 100 marks	35
04	Statement of purpose written by the students to see their writing skills - grading out of 100.	10

These criteria are applicable to both, MS and PhD students. Only those who meet these criteria are selected for exchange visit of 4 months to the University of Utah or other partnering university in USA. Before their departure to USA, they are required to defend their MS/ PhD thesis research proposal through Initial Seminar (refer Sections 5.6 and 6.8).

4.11.2 Criteria for Second Opportunity of Selection for Exchange Program

Those who failed to meet the selection criteria or those who did not avail the exchange visit due to non-receipt of visa in time will continue with their academic program at the Center and follow the schedule for taking courses and for conducting research as per details given in Section 5 (MS Program) and Section 6 (PhD Program). However, they will be considered for another opportunity to avail the exchange visit to USA subject to their progress during the third semester.

In case of MS students, following criteria shall apply:

1. Average of the percentage of classes attended in each course, graduate seminars and field visits (third semester, up to cutoff date), grading out of 100 – at least 90%.
2. Must have successfully defended his/her MS Research Proposal through Initial Seminar (refer Section 5.6)
3. Evaluation of the progress in MS thesis research, graded out of 100 marks, through pre-determined procedure involving external review by the University of Utah.

For selection of PhD students, major emphasis will be laid on their progress in dissertation research and evaluation will be based on the following criteria:

1. Percent attendance in graduate seminars and field visits – at least 90% attendance
2. Must have successfully defended his/her PhD Research Proposal through Initial Seminar (refer Section 6.8)
3. Must have passed the Comprehensive Examination (refer Section 6.6)
4. Evaluation of the progress in PhD research, graded out of 100 marks, through pre-determined procedure involving external review by the University of Utah.

It is anticipated that all students will be able to avail the exchange visit to USA by strictly adhering to the criteria for selection. If anyone fails to avail this opportunity the second time, no further opportunity will be provided. Such students will continue with their program at the Center for completion of their respective degrees as required.

4.11.3 Academic Activities under Student Exchange Program

The students joining the exchange program at the University of Utah or other partnering university in USA will spend one full semester there and pursue the following academic activities:

- Each student will be assigned an interim supervisor. Effort will be made to match the discipline of study and research interests of the students and the faculty.
- The student will maintain close liaison with the concerned interim supervisor and develop academic plan, through mutual discussions, to be followed during the semester long stay there.

- The academic plan is to include attending one course as per student discipline of study, participate in laboratory, field and computer software trainings as determined, and also conduct research during his/her stay in USA.
- While the students are expected to make full use of the opportunity while attending the course(s), their participation is only on “audit basis” and not for earning credit. In academia, an audit is an educational term for the completion of a course of study for which no assessment of the performance of the student is made nor grade awarded. Thus, auditing a course means a student can take classes and benefit from the course but cannot be graded or given credit for a particular course.
- Research undertaken by the students at the University of Utah (or other partnering university) may require some funding over and above the research facilities already available there. When such a need arises, the students should discuss the matter with their interim supervisor and if justifiable, the student will be facilitated as much as possible but within the funding that can be conveniently arranged for the purpose. It is important that the funding requests are reasonable and are meant to meet the essential and priority needs for research.
- At the end of the program, each student will be given a certificate of their participation in the student exchange program.

4.12 RESEARCH FUNDING SUPPORT TO STUDENTS AT USPCAS-W

All the MS and PhD students are required to conduct research in accordance to their research proposals approved in Initial Seminar. It is desirable that funding requirements are determined well ahead of time and sent along with the research proposal. If not already done and a funding is required for conducting research, the concerned student should discuss the matter with his/her Supervisor who will send funding requisition along with justification to the Director USPCAS-W. The matter will be evaluated by the concerned committee on case to case basis. The committee consists of the four Sectional Heads, Director Administration and Financial and Grant Manager. On recommendation by the committee, the funds will be approved by the Director USPCAS-W.

4.13 EXAMINATION POLICIES AND PROCEDURES

4.13.1 Grading System

The USPCAS-W follows letter Grades A, B, C, and F as in the following table:

Grade	Grade Point	Marks			
		Theory		Practical	
		Max Marks 100	Max Marks 50	Max Marks 100	Max Marks 50
A	4.0	75 & above	37 & above	75 & above	37 & above
B	3.0	60 to 74	30 to 36	60 to 74	30 to 36
C	2.0	50 to 59	25 to 29	50 to 59	25 to 29
F	Below 2.0	Below 50	Below 25	Below 50	Below 25

- Note: 1. Fraction shall be considered as a whole number
 2. For maximum marks other than 100 or 50, the grade point and associated marks for different grades may be determined accordingly.

After receipt of exam results from the concerned faculty/examiners, the semester results shall be compiled on the basis of Grade Point Average (GPA) calculated from credit hours and quality points. Definition of various terms and calculation of GPA and CGPA are given below:

4.13.1.1 Credit Hour (C.H)

One Credit Hour for a particular course is generally to be considered as one hour of teaching theory per week. Thus a 3 C.H theory course will require three hours of teaching per week.

4.13.1.2 Quality Points (Q.P)

For computation of the GPA, Quality Points are determined first - by multiplying the value of the grade (grade point) earned by the students with the credit hours of that course. For example, if a student obtains "A+" grade for a 3 C.H course then the Q.P of this course will be calculated as follows:

$$Q.P = 4 \times 3 = 12$$

4.13.1.3 Grade Point Average (GPA)

Grade Point Average is an expression for the average performance of a student in the course he/she has been offered. This is calculated by adding the quality points of all the courses taken divided by the total number of C.H offered.

$$G.P.A. = \frac{\text{Sum of Quality Points}}{\text{Sum of the Credit Hours}}$$

4.13.1.4 Cumulative Grade Point Average (CGPA)

The Cumulative Grade Point Average (C.G.P.A) is the expression describing the performance of a student and it is determined by the following way.

$$\text{CGPA} = \frac{\text{Sum of Quality Points for all the courses appeared}}{\text{Sum of the credit Hours for all the courses appeared}}$$

4.14 DISTRIBUTION OF MARKS FOR EACH COURSE

The minimum requirement for each semester course shall be as follows:

- (i) Assignments
- (ii) Tests/Quizzes (minimum Two)
- (iii) Mid Semester Examination
- (iv) Final Semester Examination

The external examination system shall be carried on for Practical Viva Voce, Conduct of Initial and Final Seminars, and Project/Thesis Examination.

Marks distribution for each course shall be as follows:

Theory Exam	Maximum Marks 100
Test (s)/ Assignment(s)/Quizzes/Projects	25
Mid Semester examination	25
Final Semester examination	50
Total	100

Lab/Practical Exam	Maximum Marks 100
Lab Work Evaluation	50
Semester Lab Examination	50
Total	100

Note: For the courses carrying other than 100 marks the distribution of marks shall be made accordingly.

The Mid Semester and Final Semester examinations shall be scheduled as under:

1. Mid-Semester Examination after 8 weeks
2. Final Semester Examination after 16 weeks

Mid-Semester Examination will be of one and half hour duration for 3 C.H. courses and each question paper will contain three questions without any choice.

Final Semester Examination shall be of 3 hours duration for 3 C.H. courses and each question paper will contain 05 questions without any choice. Similarly, Final semester examination shall be of two hours duration for 2 C.H. courses and each question paper will contain 03 questions without any choice. Final semester examination will be conducted from the whole course.

The procedure of conducting assignments/tests, mid semester examination, final semester examination and declaration of results shall be as follows:

- a) The scripts of all assignments will be returned and those of the tests and mid semester examination will be shown to the students after evaluation. Each blank page/gap in the scripts will be stamped/lines drawn by the teacher concerned/invigilator.
- b) Mid-semester and final examination will be conducted by the Examination Department in collaboration with USPCAS-W Directorate.
- c) The marks of each test and mid semester examination will be shared with the concerned students and solutions will be discussed in the class room immediately after evaluation.
- d) The cumulative result (including the marks of assignments, tests and quizzes, mid-semester examination and final semester examination) of each semester will be announced by the Controller of Examinations.
- e) For the award of MS or PhD degree, a student must secure 60% (CGPA = 3.0) aggregate marks and must fulfill all other requirements.
- f) If a student fails in one or more subjects, he/she shall be given one chance to appear in the supplementary examination. If the student fails again in the same subject(s) then ASRB may allow him/her one more chance to appear in the special supplementary examination based upon his/her written request and the recommendations of the Director USPCAS-W.

4.15 POLICIES GOVERNING ACADEMIC INTEGRITY AND PLAGIARISM

Higher Education Commission (HEC) has provided Turnitin (Anti-Plagiarism Software) to Public and Private Universities since 2009 to improve writing skills and avoid plagiarism. A focal person also has been assigned the task.

Turnitin accounts are provided to faculty members to check their research work (papers, articles etc.) and to postgraduate students to check their final thesis work.

4.15.1 Plagiarism Policy

- USPCAS-W encourages an academic environment of integrity, transparency and innovation.
- There is zero tolerance on plagiarism of any sort at USPCAS-W.
- All academic assignments, research papers, proposals, thesis and projects should not be more than 19% on similarity index.
- USPCAS-W has subscribed Turnitin software which is available to all students through USPCAS-W account login system.
- Students can check their similarity index and re-write to overcome or wipe out un-wanted similarity portion(s) of their write up before they submit their final write up version for any examination purpose.
- Every effort will be made to fully equip and train USPCAS-W students to enable them to spot such gaps in their research work.

- USPCAS-W management will arrange training sessions, how to use Turnitin software to detect students' own research work similarity index.

4.15.2 Plagiarism and Academic Dishonesty

Without adequate citation, the following are termed as plagiarism and academic dishonesty:

- a) The appropriation and paraphrasing of an idea, argument or information from a published source.
- b) The use of maps, chart tables, images, data sets, mathematical formulations or anything in a similar category.
- c) The submission of the same work, presentation, essay etc. in whole or in part in more than one courses without permission from each faculty member to whom the work is submitted, constitutes academic dishonesty.

To elaborate on above definitions, some of the illustrated examples of plagiarism include:

- a) Direct quotation from the public sources which is not fully or explicitly cited and acknowledged.
- b) The use of surrogates, substitutes, stand ins or their services to do and or prepare work that is submitted as one's own.
- c) The use of any work which was previously submitted by a student or any other individual.
- d) Any misappropriation in already established research materials and findings.
- e) Any un-authorized access to an instructors file or computer account.
- f) Any deliberate effort to access exam papers prior to the commencement of examination.

05

POLICIES GOVERNING MS DEGREE PROGRAM

5.1 DURATION OF DEGREE PROGRAM

The MS students are required to complete all the degree requirements within the period of two years (24 months) from the date of joining the Center. It may be noted that two years is the maximum period of financial support that the students can avail for MS degree program.

In case MS degree is not completed by the end of 24 months, the student will cease to

receive any financial support beyond that period. However, the period of degree program can be extended by maximum of one year for which student shall apply in writing to the Director USPCAS-W through his/her Supervisor thereby justifying the need for specific period of extension beyond two years. The Director USPCAS-W will forward the application to the ASRB (Advanced Studies and Research Board) through the Dean, Faculty of Architecture and Civil Engineering for approval of the extension period requested by the student. It will be responsibility of the student to complete all the degree requirements by the end of the extended period.

5.2 COURSE REQUIREMENTS

Each student registered for MS degree program at the USPCAS-W is required to complete total 33 credit hours including 27 credit hours of course work and 6 credit hours of research as per schedule given in the Section 5.3. It may be noted that all the courses as listed by each program are compulsory and to be taken by each semester.

Graduate Seminar

In addition to the course requirements as detailed under the Section 5.3, fortnightly graduate seminar series on 'Water Security in Pakistan' is mandatory non-credit hour course to be attended by all students in each semester. Attendance requirement is 90% and each student must 'pass' the seminar.

5.3 SCHEDULING OF COURSES UNDER DIFFERENT MS PROGRAMS

5.3.1 Semester-wise Courses/Research (HID Program)

First Semester (HID Program)			
S. #	Course title	Course code	Credit hrs.
01	Professional Development and Practice	HID-515	3 (3+0)
02	Hydro-informatics: Data Management and Analysis	HID-513	3 (3+0)
03	Open Channel Hydraulics	HID-512	3 (3+0)
04	Agricultural Land Drainage	HID-511	3 (3+0)
05	Graduate Seminar: Water Security in Pakistan		0
Total credit hrs			12

Second Semester (HID Program)			
S. #	Course title	Course code	Credit hrs.
01	Water Law, Policy and Community	HID-525	3 (3+0)
02	GIS and Remote Sensing Applications	HID-522	3 (2+1)
03	Groundwater Hydraulics	HID-523	3 (3+0)
04	Irrigation Water Management	HID-521	3 (3+0)
05	Graduate Seminar: Water Security in Pakistan		0
06	Preparation of Thesis Research Proposal		
Total credit hrs			12

Note: Either during the 2nd Semester or latest during the Summer following the 2nd Semester, each student is required to defend his/her thesis research proposal through Initial Seminar.

Third Semester (HID Program)			
S. #	Course title	Course code	Credit hrs.
01	Watershed Modeling	HID-616	3 (3+0)
02	Graduate Seminar: Water Security in Pakistan		0
03	Thesis Research, Data Collection & Processing etc.		
Total credit hrs			3

Fourth Semester (HID Program)			
S. #	Course title	Course code	Credit hrs.
01	Research/ Data Collection & Processing, Thesis Write-up and Final Seminar		6
Total credit hrs (HID Program)			33

Note: Some students proceed to USA under exchange program and those returning from Exchange Program are required to take the remaining course (HID-616) during the fourth semester.

Recommended Elective Courses for HID Program

- Soil and Water Conservation
- Climate Change Impact on Water Resources
- Conjunctive Surface/Groundwater Management
- Sediment Transport and Management
- Hydraulic Structure Design

5.3.2 Semester-wise Courses/Research (IWRM Program)

First Semester (IWRM Program)			
S. #	Course title	Course code	Credit hrs.
01	Professional Development and Practice	IWRM-515	3 (3+0)
02	Hydro-informatics: Data Management and Analysis	IWRM-513	3 (3+0)
03	Integrated Water Resources Management: Principles & Applications	IWRM-512	3 (3+0)
04	Hazard Planning and Risk Management	IWRM-511	3 (3+0)
05	Graduate Seminar: Water Security in Pakistan		0
Total credit hrs			12

Second Semester (IWRM Program)			
S. #	Course title	Course code	Credit hrs.
01	Water Law, Policy and Community	IWRM-525	3 (3+0)
02	GIS and Remote Sensing Applications	IWRM-522	3 (2+1)
03	Sustainable Development and WEF Nexus	IWRM-521	3 (3+0)
04	Climate and Water	IWRM-523	3 (3+0)
05	Graduate Seminar: Water Security in Pakistan		0
06	Preparation of Thesis Research Proposal		
Total credit hrs			12

Note: Either during the 2nd Semester or latest during the Summer following the 2nd Semester, each student is required to defend his/her thesis research proposal through Initial Seminar.

Third Semester (IWRM Program)			
S. #	Course title	Course code	Credit hrs.
01	Model Applications in IWRM	IWRM-614	3 (3+0)
02	Graduate Seminar: Water Security in Pakistan		0
03	Thesis Research, Data Collection & Processing etc.		
Total credit hrs			3

Fourth Semester (IWRM Program)			
S. #	Course title	Course code	Credit hrs.
01	Research/ Data Collection & Processing, Thesis Write-up and Final Seminar		6
Total credit hrs (IWRM Program)			33

5.3.2.1 Pre-requisites/Refresher Courses

Refresher courses for students with non-engineering academic background will be offered in Statistics, Basic Mathematics and Basic Hydrology etc.

5.3.3 Semester-wise Courses/Research (EnvEng Program)

First Semester (EnvEng Program)			
S. #	Course title	Course code	Credit hrs.
01	Professional Development and Practice	ENE-515	3 (3+0)
02	Solid and Hazardous Waste Management	ENE-512	3 (3+0)
03	Air and Noise Pollution Engineering	ENE-513	3 (3+0)
04	Physical, Chemical, and Biological Processes	ENE-511	3 (3+0)
05	Graduate Seminar: Water Security in Pakistan		0
Total credit hrs			12

Second Semester (EnvEng Program)			
S. #	Course title	Course code	Credit hrs.
01	Water Law, Policy and Community	ENE-525	3 (3+0)
02	Environmental Economics	ENE-526	3 (3+0)
03	Water and Wastewater Treatment Design	ENE-522	3 (3+0)
04	Environmental Impact Assessment	ENE-523	3 (3+0)
05	Graduate Seminar: Water Security in Pakistan		0
06	Preparation of Thesis Research Proposal		
Total credit hrs			12

Note: Either during the 2nd Semester or latest during the Summer following the 2nd Semester, each student is required to defend his/her thesis research proposal through Initial Seminar.

Third Semester (EnvEng Program)			
S. #	Course title	Course code	Credit hrs.
01	Occupational Health & Safety	ENE-611	3 (3+0)
02	Graduate Seminar: Water Security in Pakistan		0
03	Thesis Research, Data Collection & Processing etc.		
Total credit hrs			3

Fourth Semester (EnvEng Program)			
S. #	Course title	Course code	Credit hrs.
01	Research/ Data Collection & Processing, Thesis Write-up and Final Seminar		6
Total credit hrs			33

Note: Some students proceed to USA under exchange program and those returning from Exchange Program are required to take the remaining course (ENE-611) during the fourth semester.

5.3.4 Scheduling of Courses/Research (WaSH Program)

First Semester (WaSH Program)			
S. #	Course title	Course code	Credit hrs.
01	Professional Development and Practice	WaSH-515	3 (3+0)
02	Water and Health	WaSH-511	3 (3+0)
03	Small Water System Design	WaSH-512	3 (3+0)
04	Chemistry & Biology of WaSH	WaSH-513	3 (3+0)
05	Graduate Seminar: Water Security in Pakistan		0
Total credit hrs			12

Second Semester (WaSH Program)			
S. #	Course title	Course code	Credit hrs.
01	Water Law, Policy and Community	WaSH-525	3 (3+0)
02	WaSH and Community	WaSH-521	3 (3+0)
03	Biostatistics and Epidemiology	WaSH-522	3 (3+0)
04	Sanitation Systems, Waste Reuse and Hygiene	WaSH-523	3 (3+0)
05	Graduate Seminar: Water Security in Pakistan		0

06	Preparation of Thesis Research Proposal	
Total credit hrs		12

Note: Either during the 2nd Semester or latest during the Summer following the 2nd Semester, each student is required to defend his/her thesis research proposal through Initial Seminar.

Third Semester (WaSH Program)

S. #	Course title	Course code	Credit hrs.
01	WaSH Assessment and Practical Management	WaSH-611	3 (3+0)
02	Graduate Seminar: Water Security in Pakistan		0
03	Thesis Research, Data Collection & Processing etc.		
Total credit hrs			3

Fourth Semester (WaSH Program)

S. #	Course title	Course code	Credit hrs.
01	Research/ Data Collection & Processing, Thesis Write-up and Final Seminar		6
Total credit hrs (WaSH Program)			33

Note: Some students proceed to USA under exchange program and those returning from Exchange Program are required to take the remaining course (WaSH-611) during the fourth semester.

5.3.4.1 Pre-requisites/Refresher Courses

All applicants will need to have passed mathematics course through pre-calculus, as well as at least one college level course in chemistry and biology.

5.4 STUDENT INTERNSHIP PROGRAM

It is mandatory for all the MS students to spend 4-8 weeks for internship, once during the program, at one of the institutes/ organizations/ industries engaged in water-related works and recognized by the center for student internship. The internships are offered during each summer and will be announced during the preceding Spring semester by the Academic Coordinator. These internships are open to the MS students upon completion of first two semesters of their course work at the Center.

Internship provides a variety of benefits for students: it provides an exposure to a particular job and a profession or industry, provides practical experience of engagement with other institutes related to students' field of specialization, and it also helps students to strengthen their professional skills and interpersonal relationships in professional settings while developing business contacts and ability to work with others.

At the end of internship, the students will get certificates from host organization on the successful completion of internship. They are bound to submit completion report of their internship to the Monitoring and Evaluation Specialist duly signed and stamped by the host institution and endorsed by his/her supervisor at the parent institution.

5.5 APPROVAL OF RESEARCH PROPOSAL AND SUPERVISOR

- I. Each student will be required to select a Supervisor for his/her thesis project. He/she may also select Co-Supervisor(s) if necessary.
- II. The supervisor should be faculty member of USPCAS-W and his/her minimum qualification should be Masters in the relevant field.
- III. To facilitate students in selection of their thesis research Supervisor, each faculty member will make a presentation to entire group of 1st Semester students to familiarize them about the field of specialization and research interests of each faculty member. A copy of the presentation made by the faculty members will be made available to each student and also placed on the USPCAS-W website. It is anticipated that the students will make use of this opportunity to select their thesis Supervisor while considering their research interests.
- IV. A faculty member will not supervise or co-supervise his/her real son, daughter, brother, sister, husband or wife.
- V. A qualified faculty member/expert of any other University or Industry may be taken up as Co-Supervisor, if necessary.
- VI. On successful completion of 1st semester (minimum 3.0 GPA) the candidate can submit research proposal on given Proforma obtained from the USPCAS-W Directorate.
- VII. Each student will prepare research proposal of his/her project in consultation with his/her Supervisor and Co-Supervisor(s) if any.
- VIII. Student will fill-in the Research Proposal Proforma (**Annex IX**) and pay the required processing fees through bank challan available in the office of the Director USPCAS-W. Cash payment will not be accepted in any case.
- IX. The Research Proposal Proforma will be signed by the student himself/herself, his/her Supervisor and Co-Supervisor(s), the Sectional/ Program Incharge, the Director/Deputy Director USPCAS-W and duly approved by the Dean, Faculty of Architecture and Civil Engineering.
- X. The Supervisor/Co-Supervisor will scan the research proposal of the student through Higher Education Commission (HEC) approved software for plagiarism and will submit the duly signed and stamped hard copy containing Similarity Index to the Director USPCAS-W.

5.6 INITIAL SEMINAR

- I. A student will be eligible to give Initial Seminar of his/her project if his/her minimum GPA in the first semester is not less than 3.0 (out of 4.0).
- II. An eligible student will fill up the Research Proposal Proforma (**Annex IX**) as required, and submit it in the office of the Director USPCAS-W with the following documents:
 - a. Project Proposal: Each page of the proposal shall be signed by the student and his/her Supervisor and Co-Supervisor(s).
 - b. A copy of the Bank Challan after the payment of the processing fees.
 - c. Attested photo copy of the marks certificate of the first semester.

- d. Similarity Index of the scanning report (Plagiarism): It must be less than or equal to 19% and no any single source should have a Similarity Index more than or equal to 5%.
 - e. Attested copy of the Enrollment Card.
- III. The date of conduct of the Initial Seminar will be announced by the Director USPCAS-W after following due process with the office of ASRB.
- IV. The maximum number of Initial/Final Seminars conducted in one day will not exceed 10.
- V. The student will prepare a presentation of 10 to 15 minutes duration under the guidance of his/her Supervisor/Co-Supervisor(s).
- VI. The student will give Initial Seminar before the experts and ASRB members.
- VII. The Director USPCAS-W will prepare a panel of 3 internal and three external examiners in consultation with the concerned Sectional Head and send it to the Dean, Faculty of Architecture and Civil Engineering. The Dean will select one internal and one external from the panel of examiners and recommend to the Vice Chancellor for approval.
- VIII. The Initial Seminar will be evaluated by the following:
- a. External examiner to be appointed/ approved by the Competent Authority.
 - b. The Dean, Faculty of Architecture and Civil Engineering or his nominee.
 - c. The Director USPCAS-W
 - d. At least one member of the Advanced Studies and Research Board (ASRB) other than the Dean, Faculty of Architecture and Civil Engineering.
 - e. At least one internal examiner to be appointed/ approved by the Competent Authority.
- IX. The Director USPCAS-W will submit the evaluations of the experts and ASRB members to ASRB for final approval/decision.
- X. In case the Initial Seminar is not approved by the ASRB, the student will be asked to deliver repeat seminar by incorporating the suggestions/ comments/ observations of the experts and ASRB members.
- XI. In normal circumstances, more than two repeat seminars will not be allowed. However, the ASRB may allow a student to give third repeat seminar under special circumstances.

5.7 FINAL SEMINAR

- I. A student will be eligible to give Final Seminar if:
 - a. He/she has completed all course work as per degree program requirement with CGPA not less than 3.0 (out of 4.00).
 - b. His/her Initial Seminar has already been approved by the ASRB.
 - c. He/she has worked on the project for at least six months with effect from the date of the conduct of the Initial Seminar.
 - d. He/she has submitted one hard copy (loose bound/Spiral binding) of the thesis, prepared as per approved guidelines available at the website (www.water.muet.edu.pk)
 - e. Similarity Index of the scanning report (Plagiarism) of thesis: It must be less than or equal to 19% and no any single source should have a Similarity Index more than or equal to 5%.
- II. The student will prepare a presentation of 15 to 20 minutes duration with the consultation of his/her Supervisor/Co-Supervisor(s).

- III. The student will inform the Director USPCAS-W in writing through his/her Supervisor/Co-Supervisor(s) that he/she is ready for the final seminar.
- IV. After receiving request from the student through his/her Supervisor/Co-Supervisor(s) for conduct of the Final Seminar, the Director USPCAS-W will prepare a panel of 3 internal and 3 external examiners in consultation with the concerned Sectional Head and send it to the Dean, Faculty of Architecture and Civil Engineering. The Dean will select one internal and one external from the panel of examiners and recommend to the Vice Chancellor for approval.
- V. The Director USPCAS_W will announce the date for conduct of the Final Seminar after (i) approval of panel of experts from the Vice Chancellor through the Dean, Faculty of Architecture and Civil Engineering and (ii) following due process with ASRB office for scheduling the seminar.
- VI. The student will give Final Seminar before the experts and ASRB members.
- VII. The final seminar will be evaluated by the following:
 - a. The External Examiner to be appointed/approved by the Competent Authority.
 - b. The Dean, Faculty of Architecture and Civil Engineering or his nominee.
 - c. Director USPCAS-W
 - d. At least one member of the ASRB other than the Dean, Faculty of Architecture and Civil Engineering.
 - e. At least one Internal Examiner to be appointed/approved by the Competent Authority.
- VIII. The Director USPCAS-W will submit the evaluations of the experts and ASRB members to ASRB for final approval.
- IX. If ASRB approves the final seminar, the student will be asked to submit the final version of the thesis book (loose bound/spiral binding).
- X. If ASRB does not approve the final seminar, the student will be asked to give another final seminar by incorporating suggestions/ corrections/ comments/ observations of the experts and ASRB members.
- XI. Normally more than two repeat final seminars will not be allowed. However, the ASRB reserves the right to allow third repeat seminar in special cases.

5.8 SUBMISSION OF THESIS AND CONDUCT OF VIVA VOCE EXAMINATION

- I. The student will submit three hard copies (loose bound/spiral binding) and one soft copy of the thesis book to the Director USPCAS-W along with the processing fees of the thesis evaluation.
- II. Student will also submit the fees for anti-plagiarism services.
- III. The Director USPCAS-W will send a softcopy of the thesis to the Focal Person of the Anti-Plagiarism Cell of the University to scan it for finding authenticity of the thesis through HEC approved software for plagiarism.
- IV. Focal Person after scanning the thesis on HEC approved software will submit softcopy of the whole scanning report and duly signed & stamped hard copy of 1st page of scanning report to the Director USPCAS-W.
- V. If the scanning report has similarity index less than or equal to 19% and no any single source has a similarity index greater than or equal to 5%, the thesis will be accepted for viva voce examination. Otherwise it will be returned back to the student. This procedure will be repeated until minimum similarity index as defined above is met. The scanning fees will be charged once and the thesis will be scanned maximum three times.

- VI. Only the reports generated, signed, and stamped by the Focal Person of Anti-Plagiarism Services are treated as authentic to accept the thesis.
- VII. When the thesis is found authentic (free of plagiarism), the student will submit three hard copies (loose bound/spiral binding). The copies of final thesis submitted by the candidate are forwarded by the Director USPCAS-W to the Controller of Examinations for conduct of examination.
- VIII. The Supervisor will propose in writing to the Director USPCAS-W a panel of three external and three internal experts for conduct of the viva voce examination.
- IX. The Director USPCAS-W will submit this panel of experts to the competent authority for approval of one External and one Internal Examiner.
- X. The Director USPCAS-W will send the names of the approved examiners to the Controller of Examinations along with two hard copies of the thesis book and the scanning report of the thesis.
- XI. The Controller of Examinations will send copies of the thesis to the approved examiners for their evaluation and conduct of final viva voce examination.
- XII. The final viva voce examination will be conducted by the external and internal examiners in presence of the Director USPCAS-W and the concerned Supervisor/Co-Supervisor(s).
- XIII. If the examiners recommend that the student is successful at the viva voce examination, he/she may be declared to have passed the Master Degree examination. In case of failure, a second examination may be given on the recommendation of the thesis examiners. In normal circumstances, no student shall be permitted a third examination. However, the ASRB may allow the third examination under genuine cases/special circumstances.
- XIV. The hard bound copies and evaluation report of the examiners duly signed by all concerned will be submitted to the Controller of the Examinations for announcement of the result.

POLICIES GOVERNING PHD DEGREE PROGRAM

6.1 DEGREE PROGRAMS OFFERED

The USPCAS-W offers PhD degrees in the following three specialized fields:

- ❑ Hydraulics, Irrigation and Drainage (HID)
- ❑ Integrated Water Resources Management (IWRM)
- ❑ Environmental Engineering (EnvEng)

The PhD program is designed to provide students with detailed knowledge and critical understanding of subject specific issues within the context of water development nexus, including the science behind the subject and the skills to translate science into practice.

6.2 DURATION OF DEGREE PROGRAM

The period for completing all the requirements of a PhD Program shall be three years (six semesters). It includes the following:

- ❑ Two semesters of course work
- ❑ Mandatory participation in a Pass/Fail non-credit Graduate Seminar during each of the six semesters
- ❑ Comprehensive examination after completion of course work
- ❑ Dissertation research proposal formulation and its defense in Initial Seminar
- ❑ Participation in Exchange Program for one semester at the University of Utah (conditions apply)
- ❑ Dissertation research for at least one year
- ❑ Presentation of Progress I and Progress II Seminars & during the course of research
- ❑ Dissertation write up and its defense in Final Seminar
- ❑ Viva Voce Examination

It may be noted that the maximum period of financial support to PhD students is 36 months. In case PhD degree is not completed by the end of 36 months, the student will cease to receive any financial support beyond that period. However, the period of degree program can be extended by maximum of 12 months for which student shall apply in writing to the Director USPCAS-W through his/her Supervisor thereby justifying the need for specific period of extension beyond 36 months. The Director USPCAS-W will forward the application to the ASRB (Advanced Studies and Research Board) through the Dean, Faculty of Architecture and Civil Engineering for approval of the extension period requested by the student. It will be responsibility of the student to complete all the degree requirements by the end of the extended period.

6.3 COURSE REQUIREMENTS

The PhD program is a combination of course work and research. The students are required to complete 18 credit hours of graded course work, and write a dissertation based on original/applied research. The course work requirements include the following:

- A course on Research Methodology (3 credit hours)
- A course on Mathematical Modeling and Simulation (3 credit hours)
- Four courses relevant to the area of specialization (12 credit hours)

Semester-wise scheduling of classes, research, and other activities related to the degree program are covered under the next title "Scheduling of Classes and Research"

6.4 SCHEDULING OF CLASSES AND RESEARCH

6.4.1 Schedule for 1st and 2nd Semesters

The PhD courses, covering 18 credit hours, are offered during the first two semesters of the Program which are specified separately by each program in the following tables:

6.4.1.1 PhD in Hydrology, Irrigation and Drainage (HID Program)

First Semester (HID Program)			
S. #	Course title	Credit hrs.	Course type
01	Mathematical Modeling and Simulation	3	Common
02	Research Methodology	3	Common
03	Elective-1	3	Elective
04	Graduate Seminar: Water Security in Pakistan	0	Common
Total		9	

Second Semester (HID Program)			
S. #	Course title	Credit hrs.	Course type
01	Elective-2	3	Elective
02	Elective-3	3	Elective
03	Elective-4	3	Elective
04	Graduate Seminar: Water Security in Pakistan	0	Common
Total		9	

Note: All the students are required to finalize selection of Supervisor/Co-Supervisor(s) for research guidance, formulate dissertation research proposal during the 2nd Semester and defend it through Initial Seminar (refer Sections 6.7 and 6.8 for details) during the Summer following the 2nd Semester.

Recommended Elective PhD Courses for HID Program

1. Advanced GIS and Remote Sensing Applications
2. Water Resources System Analysis
3. Water Logging & Salinity Control in Irrigated Environments
4. Innovations in Agricultural Water Management
5. Water Control and Measurement

6.4.1.2 PhD in Integrated Water Resources Management (IWRM Program)

First Semester (IWRM Program)			
S. #	Course title	Credit hrs.	Course type
01	Mathematical Modeling and Simulation	3	Common
02	Research Methodology	3	Common
03	Elective-1	3	Elective
04	Graduate Seminar: Water Security in Pakistan	0	Common
Total		9	

Second Semester (IWRM Program)			
S. #	Course title	Credit hrs.	Course type
01	Elective-2	3	Elective
02	Elective-3	3	Elective
03	Elective-4	3	Elective
04	Graduate Seminar: Water Security in Pakistan	0	Common
Total		9	

Note: All the students are required to finalize selection of Supervisor/Co-Supervisor(s) for research guidance, formulate dissertation research proposal during the 2nd Semester and defend it through Initial Seminar (refer Sections 6.7 and 6.8 for details) during the Summer following the 2nd Semester.

Recommended Elective PhD Courses for IWRM Program

1. Advanced GIS and Remote Sensing Applications
2. Water Resources System Analysis
3. Advanced Model Applications in IWRM
4. Water Resources Management for Sustainable Development
5. Water Governance

6.4.1.3 PhD in Environmental Engineering (EnvEng Program)

First Semester (EnvEng Program)			
S. #	Course title	Credit hrs.	Course type
01	Mathematical Modeling and Simulation	3	Common
02	Research Methodology	3	Common
03	Elective-1	3	Elective
04	Graduate Seminar: Water Security in Pakistan	0	Common
Total		9	

Second Semester (EnvEng Program)			
S. #	Course title	Credit hrs.	Course type
01	Elective-2	3	Elective
02	Elective-3	3	Elective
03	Elective-4	3	Elective
04	Graduate Seminar: Water Security in Pakistan	0	Common
Total		9	

Note: All the students are required to finalize selection of Supervisor/Co-Supervisor(s) for research guidance, formulate dissertation research proposal during the 2nd Semester and defend it through Initial Seminar (refer Sections 6.7 and 6.8 for details) during the Summer following the 2nd Semester.

Recommended Elective PhD Courses for EnvEng Program

1. Advanced Water and Wastewater Treatments
2. Environmental Engineering Laboratory Methods
3. Treatment Processes for Water Reuse
4. Environmental Engineering Entrepreneurship
5. Design of Natural Treatment Systems

6.4.2 Schedule for 3rd to 6th Semesters

The requirements to be fulfilled during the 3rd to 6th Semesters are given below for all programs by each semester:

Third Semester (All PhD Programs)			
S. #	Course / Activity	Credit hrs.	Course type
01	Graduate Seminar: Water Security in Pakistan	0	Common
02	Comprehensive Examination		
03	Initiate Dissertation Research		

Note: The students selected for Exchange Program at the University of Utah or other partnering university to proceed to USA and spend full semester there. Those not selected for Exchange Program are required to fulfill all the above requirements.

Fourth Semester (All PhD Programs)			
S. #	Course / Activity	Credit hrs.	Course type
01	Graduate Seminar: Water Security in Pakistan	0	Common
02	Comprehensive Examination for those who availed Exchange Program during 3rd Semester and also for those who failed in the first attempt		
03	Progress I Seminar by each PhD student		
04	Continue Dissertation Research		

Note: The students selected for Exchange Program at the University of Utah or other partnering university to proceed to USA and spend full semester there. The item at S. # 3 does not apply to those availing Exchange Program at the University of Utah during this semester.

Fifth Semester (All PhD Programs)			
S. #	Course / Activity	Credit hrs.	Course type
01	Graduate Seminar: Water Security in Pakistan	0	Common
02	Comprehensive Examination for only those who failed in the first attempt during the 4th semester.		
03	Progress II Seminar by each PhD student		
04	Continue Dissertation Research, Analyze/Process the Data Collected and Initiate Write up of Thesis		

Note: All the students are required to fulfill the above requirements. However, those who availed Exchange Program at the University of Utah or other partnering university during the 4th semester are required to present the Progress I Seminar instead of Progress II Seminar during this semester along with other requirements listed above.

Sixth Semester (All PhD Programs)			
S. #	Course / Activity	Credit hrs.	Course type
01	Graduate Seminar: Water Security in Pakistan	0	Common
02	Progress II Seminar by those who presented Progress I Seminar during the 5th Semester		
03	Dissertation write up completed, checked by Supervisor/Co-Supervisor(s) and submitted		
04	Dissertation Defense in Final Seminar and final copy of Dissertation submitted		
05	Viva Voce Examination conducted and PhD degree awarded		
Note: All students are required to complete all the requirements by the end of this semester for award of PhD degree.			

6.5 GRADUATE SEMINAR

Note: Participation in a fortnightly graduate seminar series on 'Water Security in Pakistan' is mandatory non-credit hour course to be attended by all students in each semester. Attendance requirement is 90% and each student must 'pass' the seminar.

6.6 COMPREHENSIVE EXAM

- I. PhD candidate must take comprehensive examination during the semester following the successful completion of course work with minimum CGPA of 3.0 Those proceeding to USA during the third semester under Exchange Program may take their comprehensive examination on their return from USA during the fourth semester.
- II. The candidate will apply for comprehensive examination through his/her Supervisor to the Program/Sectional Head who will forward it to the Controller of Examinations through the Director USPCAS-W. The Controller of Examinations will then schedule the examination along with necessary arrangements for the purpose.
- III. The comprehensive examination will be a combination of written and oral examination. The written component carries 60% and oral component 40% marks. In the written part, objective test will be conducted and for oral examination a following panel will be approved by the competent authority:
 - (a) At least one internal examiner (other than supervisor)
 - (b) One external examiner
- IV. The examination should assess student's knowledge and intellectual maturity and ability to integrate and assimilate the knowledge obtained from courses and other independent studies.
- V. The written examination will cover objective type questions from all subjects the student studied during the PhD course. It will be 3 hours examination covering 180 MCQs. The qualifying score is 60%. Similarly, the passing marks in the oral component will also be 60%.
- VI. Student can only appear in oral part if he/she passes the written part.
- VII. The marks secured in written and oral components will not be reflected in marks certificate/transcript. However, the examiners will send the sealed result of comprehensive examination to the Controller of Examinations through the Director USPCAS-W. The Controller of Examinations will then announce the result.

- VIII. In case of failure as whole or part of exam, student will be given one more opportunity. He can re-appear during the semester following the first attempt at the Comprehensive Examination.
- IX. After passing the Comprehensive Examination, he/she then becomes candidate for Doctoral degree.

6.7 APPROVAL OF RESEARCH PROPOSAL AND SUPERVISOR

- I. Student will fill-in the Research Proposal Proforma (**Annex IX**) and pay the required processing fees through bank challan available in the office of the Director USPCAS-W. Cash payment will not be accepted in any case.
- II. The Research Proposal Proforma will be signed by the student himself/herself, his/her Supervisor and Co-Supervisor(s), the Sectional/ Program Incharge, the Director/Deputy Director USPCAS-W and duly approved by the Dean, Faculty of Architecture and Civil Engineering.
- III. The Research Proposal Proforma will be submitted in the office of the Director USPCAS-W with the following documents:
 - (a) Research Proposal: Each page of the proposal will be signed by the student and his/her Supervisor and Co-Supervisor(s).
 - (b) A copy of the Bank Challan after the payment of the processing fees.
 - (c) The Similarity Index of the scanning report (Plagiarism): It must be less than or equal to 19% and no any single source should have a Similarity Index more than or equal to 5%.
 - (d) Attested copy of the Enrollment Card.
- IV. The Director USPCAS-W will process his/her application and forward it to the Advanced Studies and Research Board (ASRB) for approval. The ASRB will approve the Supervisor and, if needed, Co-Supervisor(s) in consultation with Supervisor along with the research proposal.

6.8 CONDUCT OF INITIAL SEMINAR

- I. After approval of his/her research proposal by the ASRB, the student will be required to deliver Initial Seminar before the ASRB and experts.
- II. The student will prepare a presentation of 15–20 minutes duration under the guidance of his/her Supervisor/Co-Supervisor(s).
- III. The student will give Initial Seminar before the experts and ASRB members.
- IV. The Initial seminar will be evaluated by at least six Advanced Studies and Research Board (ASRB) members.
- V. The evaluations will be submitted to the ASRB for final approval.
- VI. In case the Initial Seminar is not approved by the ASRB, the student will be asked to deliver another seminar by incorporating the suggestions and observations of the ASRB members and experts.
- VII. After approval of the Initial Seminar, the research proposal must be evaluated by at least three experts in the relevant field, one from within the country and two from abroad.
- VIII. The panel of the experts will be proposed by the Supervisor and approved by the ASRB.
- IX. After completing all the formalities, including Initial Seminar, the student will proceed with his/her research work under the guidance of his/her Supervisor in accordance with the approved Regulations of PhD degree program, and deliver progress seminars and submit progress reports as required by the ASRB.

6.9 CONDUCT OF PROGRESS I SEMINAR

- I. A student will be eligible to deliver Progress I Seminar if his/her course work including comprehensive examination is completed, his/her Initial Seminar is approved by the ASRB and his/her research proposal is evaluated by the approved experts in the relevant field and approved by the ASRB.
- II. The date of conduct of the Progress I Seminar will be announced by the Director USPCAS-W.
- III. The student will prepare a presentation of 15–20 minutes duration under the guidance of his/her Supervisor/Co-Supervisor(s) and discuss about the progress that he/she has achieved after his/her Initial Seminar.
- IV. The student will give Progress I Seminar before the experts and ASRB members.
- V. The Progress I Seminar will be evaluated will be evaluated by at least six Advanced Studies and Research Board (ASRB) members.
- VI. The evaluations will be submitted by the Director USPCAS-W to the ASRB for approval.
- IX. In case the Progress I Seminar is not approved by the ASRB, the student will be asked to deliver another seminar by incorporating suggestions and observations of the ASRB members and experts.

6.10 CONDUCT OF PROGRESS II SEMINAR

- I. A student will be eligible to deliver Progress II Seminar if his/her Progress I Seminar is approved by the ASRB.
- II. The date of the conduct of the Progress II Seminar will be announced by the Director USPCAS-W.
- III. The student will prepare a presentation of 15–20 minutes duration under the guidance of his/her Supervisor/Co-Supervisor(s) and discuss about the progress that he/she achieved after his/her Progress I Seminar.
- IV. The student will give Progress II Seminar before the experts and ASRB members.
- V. The Progress II Seminar will be evaluated by at least six Advanced Studies and Research Board (ASRB) members.
- VI. The evaluations will be submitted to the ASRB for final approval.
- VII. In case the Progress II Seminar is not approved by the ASRB, the student will be asked to deliver another seminar by incorporating the suggestions and observations of the ASRB members and evaluators.
- IX. At least two Progress Seminars are mandatory to qualify for the Final Seminar.

6.11 CONDUCT OF FINAL SEMINAR

- I. A student will be eligible to deliver Final Seminar if:
 - a. His/her Progress II Seminar has already been approved by the ASRB.
 - b. His /her final version of thesis book (loose bound) has been submitted for evaluation.
 - c. He/she has published at least one research paper in the HEC approved journal.
- II. The student will prepare a presentation of 30–45 minutes duration with the consultation of his/her Supervisors.
- III. The student will inform the Director USPCAS-W in writing through his/her Supervisor/Co-Supervisor(s) that he/she is ready for the Final Seminar.
- IV. The Director USPCAS-W will announce the date for the conduct of the Final Seminar

after following due process with ASRB.

- V. The student will give Final Seminar before the experts and ASRB members.
- VI. The Final Seminar will be evaluated by at least six Advanced Studies and Research Board (ASRB) members.
- VII. The Director USPCAS-W will submit the evaluations to ASRB for final approval.
- VIII. If ASRB does not approve the Final Seminar, the student will be asked to deliver another Final Seminar by incorporating suggestions and observations of the ASRB members and experts.

6.12 SUBMISSION OF DISSERTATION & CONDUCT OF VIVA-VOCE EXAMINATION

- I. The student will submit one hard copy (loose bound) and one soft copy of the dissertation to the Director USPCAS-W along with the processing fees of the thesis evaluation through his/her Supervisor.
- II. Student will also submit the fees for anti-plagiarism services.
- III. The Director USPCAS-W will send the softcopy of the dissertation to the Focal Person of the Anti-Plagiarism Cell of the University to scan it for finding its authenticity through HEC approved software for plagiarism.
- IV. If the scanning report has similarity index less than or equal to 19% and no any single source has a Similarity Index greater than or equal to 5%, the dissertation will be accepted for viva voce examination. Otherwise it will be returned back to the student. This procedure will be repeated until minimum Similarity Index as defined above is met.
- V. The student will submit required number of hard copies (loose bound) along with softcopy of the dissertation to the Director USPCAS-W through his/her Supervisor for expert evaluators.
- VI. The thesis will be sent to the experts within the country and abroad who had originally evaluated the research proposal. If any of the evaluators is not available, the ASRB shall appoint a new evaluator. The name of any new evaluator will be again proposed by the Supervisor and same process will be followed for approval of new evaluator as observed previously.
- VII. Once satisfactory report is received from the approved evaluators, the student will be allowed by the ASRB to appear in the viva voce examination to defend his/her dissertation. However, if the research work is not considered satisfactory by the evaluators the student will incorporate suggestions given by evaluators and resubmit the modified dissertation through his/her Supervisor.
- VIII. The student will submit two hard copies (loose bound) of the thesis book to the Director USPCAS-W through his/her Supervisor for viva voce.
- IX. The Supervisor will propose a panel of three external and three internal experts for conduct of the viva voce examination.
- X. The Director USPCAS-W will submit this panel of experts to the competent authority for approval of one External and one Internal Examiner.
- XI. The Director USPCAS-W will send the names of the approved examiners to the Controller of examinations along with two hard copies of the dissertation along with the scanning report.
- XII. The Controller of Examinations will send copies of the thesis to the approved examiners for their evaluation and conduct of final viva voce examinations.
- XIII. The final viva voce examination will be conducted by the external and internal examiners in presence of the Director USPCAS-W.
- XIV. If the examiners recommend that the student is successful at the viva-voce

examination, he/she may be declared to have passed the Doctor of Philosophy Degree examination. In case of failure, a second examination may be conducted on the recommendations of examiners. In normal circumstances, no student shall be permitted a third examination. However, the ASRB may allow the third examination under genuine circumstances.

- XV. The hard bound copies prepared on guidelines and approved by the Director USPCAS-W and evaluation report of the examiners duly signed by all concerned will be submitted to the Controller of Examinations for announcement of the result.
- XVI. One hard copy and a softcopy of the dissertation will be submitted to the HEC for PhD country directory.

6.13 REVIEW OF ACADEMIC POLICIES

- The academic policies shall be reviewed and revised on yearly basis; however some reviews can be under taken twice a year or even more frequently if deemed necessary.
- All USPCAS-W students are advised to consult with academic heads and visit website regularly for updated academic policies.
- In all academic matters, the decision of academic heads, director academics and project director shall be final.

STUDENT SERVICES AND FACILITATION

MUET provides a range of facilities to its students, faculty and staff to create an atmosphere of shared vision for enhancing the lives and livelihoods of students. An overview of facilities and resources available to students is provided below.

7.1 STUDENT-TEACHER CENTER:

The University has recently constructed a Students-Teachers Center over an area of 20,000 sq. ft. Several facilities are provided under one roof including but not limited to: information service, student registration desk, bank, post office, and a cafeteria.

7.2 INFORMATION AND COMMUNICATION PROCESSING CENTER:

The Information and Communication Processing Center (ICPC) of the university is equipped with the latest devices and servers.

- It works round the clock to provide data and voice services to various parts of the universities including on-campus students' residences.
- To encourage research and development related activities between universities, the Center has connected MUET with fifty two (52) other universities through PERN (Pakistan Educational Research Network).
- It provides uninterrupted services to students through VPN accounts, which is provided on request, to enable them to work from their residences.

Some of the facilities made available by this Center include:

- High Speed Internet connection with backbone of 100MB.
- High speed network laid entirely on Fiber Optics.
- 24x7x365 hrs Voice Exchange/Intercom services.
- Digital Library Services through PERN.
- HEC online journals access through PERN.
- VPN service for students working from their Homes.
- Online Courseware / Material and presentations.
- Hardware and Software resources sharing.
- Video Conferencing System (Lectures and Presentations sharing) between all Universities of Pakistan through PERN.
- Provide Email accounts on MUET domain.
- Free Access to Genuine Microsoft Software (Operating System and Application Software).

7.3 RESIDENTIAL ACCOMMODATION

Male and female students live in separate hostels. On-campus availability of accommodation for the postgraduate students is, however, limited. Therefore, several students live off-campus. Private accommodation in Jamshoro and Hyderabad is available at reasonable rates, and most of these areas are connected to campus through regular bus service. However, accommodation to female students registered with USPCAS-W will be provided at the campus on priority basis. Female students may contact Hostel Warden Ms. Uzma Imran for their accommodation needs (uimran.uspcasw@faculty.muet.edu.pk).

7.4 TRANSPORT

The University has a fleet of its own buses that commute within the campus as well as between the campus and main towns (Hyderabad, Qasimabad, Latifabad, and Kotri) for convenience of students, faculty and staff. This service will be provided to students of USPCAS-W free of charge.

7.5 CAFETERIA

- Every effort is made to create conducive environment for students to work longer hours in academic buildings.
- A cafeteria facility inside academic buildings is available.
- Students can buy snacks and meals on subsidized rates.
- A variety of full meal and snacks is available just round the corner on a good walk of five minutes to Student-Teacher Centre as an additional option to students.

7.6 PHOTOCOPY FACILITIES

- All students of USPCAS-W are entitled to subsidized photocopies and prints.
- Students can use their login system and print or photocopy on nominal charges through their login account system.
- All prints and photocopy bills shall be paid by the student on monthly basis.

7.7 MEDICAL

- The campus has a part-time dispensary that is supported by a qualified doctor and a dispenser which deals with only minor ailments. Medical emergencies are referred to the nearby LUMHS Hospital. An ambulance facility is also available.

7.7 SPORTS

- MUET's sports culture is quite diverse and rich. Interested students take part in a range of sports such as; basketball, shooting ball, squash, table tennis, badminton, athletics, cricket, football, hockey, handball and tennis, among others. In addition to organizing inter-departmental and inter-hostel competitions, MUET sports teams regularly participate in Inter-University sports events. Indoor games and a gym facility separate for female and male students is available in a gymnasium constructed on an area of 25,845 sq. ft.

7.9 LIBRARY AND ON-LINE INFORMATION CENTER

MUET's library and online information center contains more than 132,000 books related to Engineering, Science and Technology, and other related fields. Other key features of the library include:

- Access to 29 E-databases for e-journals and e-books both within the university campus and outside the campus under the Digital Library Program.
- More than 22,000 text books are available in the Book Bank. These are loaned to students for one term on a nominal rent.
- Other services include: inter-library loan, photocopying of material, internet, and multi-media center, among others.
- Besides the main library and online information center, students can also access subject-specific books and literature from a dedicated library of USPCAS-W.
- A separate portion dedicated for checking out books for USPCAS-W students only has been made available.

7.9.1 Reference Services

The MUET Library & Online Information Center provides reference services to faculty members, postgraduate students, researchers and undergraduate students through Research Support Desk and Information Desk. A collection of 17250 books is available for ready reference to all MUET Library members. Reference services also provide photo copier service and also assist the researchers for locating reference material.

7.9.2 Book Bank Services

The Book Bank is the main collection of text books meant specifically for students. The books available in the book bank are issued to students for full semester on nominal rent basis.

7.9.3 Lending Services

Library circulation or library lending comprises the activities around the lending of library books to users of a lending library. A circulation or lending collection is one of the key section of a library. MUET library lending collection has a collection of 98143 books of various engineering subjects. The students can have the books issued for a period of 30 days.

7.9.4 Literature Assistance Services

Library Staff helps patrons to ease them in conducting a literature search on a particular subject or topic and may facilitate in

- Choosing right resources for your search
- Fine-tuning your search strategies
- Identifying materials closely related to the research topic
- Supplying of full-text articles.
- Answering other queries related to the accessibility and delivery.

Patrons may contact Assistant Librarian Multimedia section for helping and finding the e-resources and other materials in the library.

7.9.5 Book Lending Policies of the Library

Library is a shared facility for the benefit of all students. Following policies are in place to ensure equitable, efficient and accessible library resources for students:

- All registered students in MS and PhD shall apply for library membership on prescribed form **(Annex VI)**. Every student shall pay Rs.200 non-refundable fee through bank challan in the Library account. The application form for smart card can be downloaded from USPCAS-W website (www.water.muet.edu.pk) or a print version can be obtained from USPCAS-W Librarian.
- To make an application students need four (04) passport size photographs, duly attested by concerned head of the program, and application form completed in all respects which shall be submitted to the Librarian, USPCAS-W.
- The Librarian shall issue a smart card to each student. The borrower's card shall be non-transferable and students are required to obtain smart card to use the facilities of the library, No transaction or issue and return of books shall be made without the smart card.
- A borrower who losses his/her card shall at once inform the Librarian in writing. A duplicate card shall be issued to the student on payment of Rs.200/- fee, the student shall also provide an affidavit declaring that his/her card is lost, and that the affidavit shall be countersigned by the concerned head.
- Every student can be issued 05 (five) books from lending collection for 30 (thirty) days. If he/she fails to return the books on due date an amount of Rs.1.00 (rupee one) will be charged as a fine per day. The amount of fine shall be paid in the Library bank account through bank challan.
- When a requested book is already loaned out of the library, the student who intends to borrow the same book shall fill-in a reservation card. As soon as the book is received in the library the intending borrower shall be informed who must collect the book within a week. Such books shall be issued in order of priority on the basis of the date of reservation.
- If a borrower desires to retain a book beyond the prescribed period, he/she may get it re-issued provided the book is not reserved for another borrower.
- Members are required to check the book condition at the time of borrowing, and any defect in the book must be notified to the library counter.
- Dictionaries, encyclopedia, reference books, original manuscripts, books which contain valuable engravings, loose plates are made or those which are unbound or un-catalogued cannot be issued except with the permission of the Librarian as special case.
- One copy of every book will be kept in the reference section which cannot be issued.
- A book urgently required in the library can be recalled by the Librarian.
- Member shall not damage or mark on any library borrowed article. In case of damage or any mark on the library article, the Librarian may ask the student to pay double the prevalent market price of article. Alternatively, student can arrange same copy if acceptable to the Librarian.
- The result of students can be withheld for the students who have outstanding library books. The Librarian will send the list of students who have outstanding library books to the

Controller of Examinations and Academic Coordinator of USPCAS-W.

- Members cannot take any article of the library without being issued on their account; such act of taking book out of the library shall be treated as treachery and shall be reported to the Disciplinary Committee.
- No books for the new academic session can be issued to those students who have not cleared their account of previous session.
- The Chairman Library Committee may at his/her discretion, reduce or remit any kind of fine due to student.
- The amount of fine under MUET regulation 18 shall be deposited in the bank under the head "Library Supervision Committee". The amount shall be placed at the disposal of Library Committee, and the account will be operated by the Chairman Library Committee and the Librarian.

7.9.6 Regulations Regarding the Book Bank

- The students enrolled in the USPCAS-W shall be entitled to borrow books from the Book Bank.
- Any student who is the member of USPCAS-W Library will also be considered as a member of the Book Bank.
- The Library security will also be considered for the Book Bank.
- The members shall be entitled to borrow up to five (05) books at a time for 120 days.
- The student can keep the books for one semester @ Rs.10.00 (rupees ten) per book as rental charges. If any students fails to return the books on due date the full semester charge will be charged.
- The Chairman Library Committee may, in exceptional cases, reduce or remit the fine at his discretion.
- The results of those students shall not be declared who have outstanding library books. The librarian will notify the list of such students to the Controller of Examinations.
- No clearance certificate of any kind will be issued to a student who fails to return the book(s) or pay for the lost book(s).
- Member shall not damage or mark on any library borrowed article. In case of damage or any mark on the library article, the Librarian may ask the student to pay double the prevalent market price of article. Alternatively student can arrange same copy if acceptable to the Librarian. However, if the book is out of print, the same may be replaced by the substitute title, recommended by the subject teacher and forwarded by the head of concerned department. The cost of the substitute book must not be less than the book lost. The Chairman Library Committee is authorized to accept or reject such replacement.
- The cost of lost/damaged article, rental fee and the amount of fine imposed upon the student borrowing books from the Book Bank shall be deposited in the bank account entitled "Book Bank Account "
- The amount thus collected shall be placed at disposal of the Library Committee for preservation of the existing stock. The account will be operated by the Chairman Library

7.9.7 Conduct and Functioning of the Library

- The students are not allowed to bring personal books, brief case, large size of coats, etc. These may be deposited with the library counter at main gate of the library.
- Smoking is prohibited in the library.
- Talking aloud is prohibited in the library.
- Infringements of these Regulations shall entail one or more penalties below:
 - A fine up to Rs.1000/-
 - Suspension from or cancellation of library committee.
 - Any other disciplinary action.
- The Librarian shall be responsible for maintenance of order in the library. For disorderly conduct or breach of any regulations, he/she require a member so offending to withdraw from the library for the remainder of the day and shall immediately report the case to the Chairman Library Committee.
- The Library security deposit fees shall not be refunded to a student unless he gets clearance from Library.
- All deposits of the library accounts will be made directly in the bank through bank challan by library member.
- Stock taking shall be held once every three years, members shall return the borrowed books for stock taking by the date notified by the Librarian.
- The library shall remain closed on university holidays & for the stock taking period.

7.9.8 Regulations Regarding Internet Services

- Internet account will be operated and maintained by Chairman Library Committee and Librarian.
- All income from membership fees of Rs.200/=, internet use, printing, scanning and CD writing will be deposited in this account.
- Any expenditure related to running of Internet services shall be utilized from this account.

7.9.9 On-Line Information Center

- The Center is equipped with the state of art computer facilities with round the clock, high bandwidth internet connectivity. Moreover, the USPCAS-W building is equipped with Wi-Fi enabled devices to provide students with unlimited access to the internet

7.9.10 Computer Labs

- Computers are available for all students for their academic activities such as downloading articles, online lectures etc. during working days from 8:00 a.m. to 4:00 p.m.
- To avoid disruptions students are not allowed entry in the labs while classes are in progress.
- To ensure USPCAS-W's network integrity students are not allowed to install their own software programs on USPCAS-W computers. Should additional software be required to undertake a course related assignment students can request approval of the concerned faculty and contact the network administrator well in advance to make arrangements for loading the software, only on specific work stations.
- Every effort is made to mitigate frequent power failures. Students are advised to make their

own efforts to save their data while working on computers. Students are strongly encouraged to maintain a backup of their data as the lab staff will not be responsible for any loss of data.

7.9.11 Account Login Policy

For smooth operations of the computer labs, while protecting privacy of information of all users, following rules are in place:

- I. All students shall be given a unique user ID and password (to be changed by student later on) to access the USPCAS-W learning management system and their email account.
- II. No one is allowed to log-in using someone else's user ID and password.
- III. To protect from un-scrupulous users, students are advised to frequently change their password. Students are strongly advised to ensure that they are logged off properly after completion of their session from work station. In case user student has not logged off from work station properly in any event account of a student used by some other user shall be responsibility of account holding student.
- IV. If student is compelled to be away from the terminal for more than 15 minutes, he/she must log off until and unless there is a process running which may take longer to complete. In such event the user student is strongly advised to inform the lab in charge to ensure that user account and work running on is protected properly.
- V. No students are allowed to make any changes to equipment configuration in any way what so ever.
- VI. No one is allowed to unplug any cables, connection, terminals or any other equipment.
- VII. No student shall be allowed to store data in un-authorized way if data storage is provided, it can be used for personal data storage otherwise student can request to lab in charge for personal data storage allocation.

7.9.12 Discipline in Computer Labs

- I. All USPCAS-W students are expected to conduct themselves with responsibility and dignity and adhere to COC given the general policies in this handbook.
- II. In addition, while working in computer lab following rules shall be applicable:
 - a. To ensure conducive environment it is necessary to maintain clean and proper functioning of equipment used in computer lab.
 - b. Students are not allowed eating, smoking, drinking, use of cell phones, playing video games, watching non-academic, un-ethical stuff in computer lab of USPCAS-W.
 - c. As a courtesy to fellow students you are expected to leave your terminal on completion of your task neat and clean.
 - d. Before leaving the terminal desk any trash must be placed in trash cans provided in labs.
 - e. Placement of equipment and other furnishings in the computer labs have been done considering the convenience of all students, consequently students are not allowed to move or re-arrange any equipment without permission of the lab in charge.
 - f. To protect privacy of everyone passwords must not be shared to anyone under any circumstances.
 - g. While every effort is made to ensure that all students get reasonable amount of time to use lab facilities it is advisable to students to consult the lab schedule to avoid any confusions in this regard. Please note that during open hours the use of lab is based on the policy of first come first serve basis.
 - h. Particular class groups shall be slotted for particular assignments on student request supported by their concerned faculty and sent through the Academic Coordinator.

7.10 STUDENT ACTIVITIES AND ASSOCIATIONS

- I. USPCAS-W management firmly believes that to inculcate confidence, initiative and entrepreneur talent can enhance students' capability to participate in a meaningful way in economic process of the nation.
- II. It is important that the students be given an opportunity to exercise and develop their skills during the course of studies. As a result students are strongly encouraged to join, participate and assume leadership roles in various students' associations, academic forums and clubs.
- III. At USPCAS-W a Society of Water Managers is body of young, ambitious individuals cutting across different programs of the USPCAS-W. The Society plays a conduit between the administration and students.
- IV. The water manager's society hosts among other activities interaction between industry and students international linkages.
- V. The water managers' society is important source of students' extracurricular activities at USPCAS-W.
- VI. The society is democratically elected body of students backed by USPCAS-W faculty and management.
- VII. The membership of society is open to all enrolled students of USPCAS-W in MS and PhD programs.

7.11 STUDENT CODE OF CONDUCT AND CARE FOR ENVIRONMENT

- I. USPCAS-W obligates all students enrolled at USPCAS-W to make tangible efforts to contribute in safe, clean and healthy learning experience through clean environment.
- II. Students are expected to conduct themselves in orderly, polite and ethical manners.
- III. To ensure clean atmosphere, following are few of the tips for students;
 - a. Eating, drinking and smoking in class rooms, corridors, computer labs, in lawns must be refrained.
 - b. Any other form of unauthorized wild littering is not allowed. For littering purpose only designated bins can be used.
 - c. Throwing utensils/cups/bottles (disposable only) on campus is highly discouraged. The utensils must be returned to cafeteria desk after use.
 - d. Disfiguring furniture and other property by scratching and graffiti at USPCAS-W and MUET is un-acceptable practice; such behavior can be taken seriously by administration.
 - e. USPCAS-W has adopted free smoking policy hence no one on either student or faculty can smoke cigarettes, cigar or any other item related to such unhealthy activities. However, those who smoke can leave the building premises to outside in a designated corner for such unhealthy activities corner.
 - f. USPCAS-W places high priority on enabling environment for students to learn.
 - g. Students are expected to conduct in a polite manner using appropriate language to their colleagues to give a positive gesture which is necessary to maintain an efficient and conducive working environment.
 - h. USPCAS-W is committed to contribute in reduction of CO₂ emission. Students are discouraged to use their own vehicles to commute campus area. As an alternative option students are encouraged to use MUET and USPCAS-W point buses or public transport.

- i. In case it is necessary for some students due to variety of reasons to use their personal vehicles such students must park their vehicles in appropriate parking lots.
 - j. Parking lots provided with shades are reserved for faculty and staff hence faculty and staff shall get preference over student vehicles.
 - k. Students' parked vehicles are solely student responsibility. In case of any damage or theft of vehicle USPCAS-W shall not share any responsibility.
- III. Every USPCAS-W student is expected to conduct her/himself in an environmentally conscious manner by practicing the following manners:
- a. Preserve: Keeping in view importance to preserve the environment every effort must be taken as a responsible citizen to preserve.
 - b. Conserve: every student must exhibit an effort and habits to conserve nature.
 - c. Protect: Students are considered to be a vital force to protect tress, wildlife and human life.
 - d. Recycle: USPCAS-W students are expected to be a representative of an environment conscious institute which is thriving to preserve and protect environment through recycling.
 - e. Save: Students at USPCAS-W are obligated to reinforce every step to save water which is saving life of human and planet.

7.12 STUDENT INFORMATION SYSTEM

- I. Students are informed for upcoming events, further participation in events and in any emergency, due to unexpected political volatile situations, any early disaster warning. Such events need quick communication ways. Hence USPCAS-W shall use all possible communication sources efficiently and effectively.
- II. Students are advised to check their emails on regular basis.
- III. Student information boards need to be checked every day before leaving campus.
- IV. Students are responsible for updating their cell phone/home phone contacts.
- V. Students must provide their alternative email IDs, which can be used in case of problems in USPCAS-W login system failure or any unforeseen issues.
- VI. On campus students are responsible for their own belongings like laptops, cell phones, bags, books or any other materials.

7.13 ENERGY EFFICIENCY

USPCAS-W students are expected to show a responsible behavior in judicial use of energy. While on campus, the students are expected to:

- a) Use minimum electricity. On leaving class room, campus, library or any other campus area turn off all unwanted energy consuming appliances.
- b) Turn off water taps when not in use.
- c) Report all malfunctioning taps, appliances, educational aids etc. to the administration.

7.14 COMPLAINS OF SEXUAL HARASSMENT

USPCAS-W encourages female students' enrollment in all programs. In order to provide level playing field across the gender it is imperative to create conducive environment where female and male students can interact and participate for high level learning outcomes.

USPCAS-W has adopted gender equity policy which ensures marginalized gender portion of the society to have equal opportunities in all walks of life. The center is fully in compliance of

Pakistan Sexual Harassment Act 2010 which is a clear message that USPCAS-W has zero tolerance against any kind of sexual harassment in work environment.

Following steps are for students to understand what they should be doing if there is complaint of sexual harassment.

STEP 1: A formal complaint in writing explaining the circumstances, actual act which is considered by a victim as sexual harassment and any evidences can be submitted in the office of Project Director USPCAS-W.

STEP 2: The Project Director shall review the case and if deemed appropriate shall forward the application to the Focal Person (Dr. Uzma Imran, uimran@faculty.muet.edu.pk) of the Sexual Harassment Committee/ Gender Equity Committee. The committee will investigate the matter according to merit and decisions shall be recommended for further actions.

Students are advised to read Sexual Harassment Act 2010 for more clarity on what constitutes sexual harassment on USPCAS-W web page water.muet.edu.pk.

7.15 DISCIPLINARY COMMITTEE

- In an event of violating the discipline of USPCAS-W, the management shall take a sue motto notice or act in response to any call of action by member of staff/faculty or fellow students.
- Such cases against alleged students' acts violating the Code of Conduct of USPCAS-W discipline shall be brought to the USPCAS-W Disciplinary Committee.
- The committee shall decide keeping in view the merit of such cases.
- The process of committee appointment and inquiry process shall be the same as observed by MUET.
- The penalties shall be decided by the MUET authorities.

7.16 AMENDMENT TO REGULATIONS

These Regulations may be amended from time to time as deemed fit by the authorities of the Mehran University of Engineering & Technology, and, unless specifically stated otherwise, the amended Regulations shall apply to the already registered students as well as to the new students.



U.S-Pakistan
Center for Advanced Studies in Water
Mehran University of Engineering & Technology



REGISTRATION FORM

(Session: Fall 2016)

Please Tick () in Appropriate Box

Program of Study: M.S. Ph.D.

Discipline: EnvEng IWRM HID WASH

1. Name _____ Gender: _____ Surname: _____

2. Father's Name _____

3. CNIC _____

4. Is Passport Available (Yes/No): _____ If yes; Date of Expiry: _____

5. Domicile/District: _____ Province: _____ Blood Group _____

6. Current Mailing Address _____

7. Phone _____ Cell#: _____ E-mail _____

8. In case of Emergency:

Contact Person: _____ Relation: _____

Contact#: _____

9. Any known disease/allergies: _____

10. Any disabilities: _____

Signature: _____

Date: _____

DO NOT WRITE ANY THING BELOW THIS LINE

Admitted

Not Admitted

Roll No. Issued: _____

PROJECT DIRECTOR

UNDERTAKING

Annex II

I, Mr. / Ms. _____ S/O / D/O _____,
having of CNIC No. _____ joining U.S.-Pakistan Center for Advanced
Studies in Water (USPCAS-W), for the academic session Fall 2016 do hereby undertake and
abide the following terms and conditions:

1. I will attend all the classes from the beginning of the semester on 29.08.2016 as per the timetable. In case, I do not show up after the classes hence started, I shall be ineligible for admission.
2. I will be regular and punctual to all the classes (theory and practicum) and secure attendance of not less than 95% in each subject. I am fully aware that attendance less than 95% in any of the subjects in any calendar month will make me ineligible for my monthly stipend.
3. I am also aware that if my overall attendance at the end of each semester is less than 95%, I will be ineligible to appear in the examination and my admission is liable to cancel.
4. As a full time student of the center, I will not be a fulltime/part-time employee of any other organization.
5. I will not participate in any political activity and create violence or disturbance of any form inside or outside the campus that will breach center's policy I am fully aware that failing to it required action may be taken against me as per the rules and regulations of the Center.
6. If I leave/quit the studies during mid of the program, I will be responsible to pay all the expenditures incurred upon me in terms of fees, stipend and other expenditures.

ACKNOWLEDGEMENT

I have gone through carefully the terms and conditions cited above, and understand that if I fail to comply with the terms/conditions, I will be liable to suitable action as per USPCASW rules and regulations. I undertake that I will strictly follow the above terms and conditions.

Signature of Student

Witness 1: (Signature) _____

Witness 2: (Signature) _____

Name & Father's Name: _____ **Name & Father's Name:** _____

CNIC No. _____

CNIC No. _____



**MEHRAN UNIVERSITY
OF ENGINEERING & TECHNOLOGY,
JAMSHORO**



**INFORMATION COMMUNICATION & PROCESSING CENTER
SMART (STUDENT ID) CARD REGISTRATION FORM**

Bank Challan No.		Date of Payment	
------------------	--	-----------------	--

Name (In Block Letters)		New Card	<input type="checkbox"/>	Duplicate	<input type="checkbox"/>

Father's Name		Surname	
CNIC No.			
Passport		Nationality	
Date of Birth		(DD MMMM, YYYY)	
Address			
City		Province	
Country		Zip Code	
Email		Mobile #	

Department					
Programme (✓) Appropriate	UG	PG	MPhil. / PhD.	Date of Admission	
Roll No.				Enrollment No.	

Emergency Contact Person		Phone / Mobile	
Known Medical Conditions			Blood Group

Signature of Applicant

Chairman / Chairperson/Director

For Library Membership Verification		For Office Use Only	
Bank Challan No. & Date		Form received Date:	
Signature & Stamp of Library Focal Person		Expected Card Delivery Date:	
		Signature of Smart Card Focal Person	

Acknowledgement of Receipt

Expected Card Delivery Date: _____

This is to acknowledge that Mr./ Ms. /Mrs _____ of Dept. _____ bearing Roll no. _____ has submitted his / her form on _____.

Remarks _____

Received By

Note: Please attach a photocopy of valid ID Card / Enrollment Card / Admission Letter.



Mehran University of Engineering & Technology Jamshoro



Information Communication & Processing Center

E-mail Account Request Form

*CNIC #	
Full Name (In caps)	
*E-mail Address	
*Job Title (for Employees) *Roll No: (for students)	
Department	
Intercom /Ext: No (If any)	
*Cell Number	
Submitted on:	

Signature of Applicant

Chairman / Director / Sectional Head

Note:

1. Students are required to attach the copy of MUET ID card along with this form. Enrollment card or admission letter are also acceptable in place of the ID card.
2. New email account will be communicated to the concerned via existing E-mail Address.

For Office use

MUET Email Account	
E-mail Id: _____	Password: _____
Date of Issuance of E-mail Account: _____	

Assistant Manager IT

Manager Systems, ICPC

Information & Communication Processing Center (ICPC)
+92 (22) 2772250-73 Ext.2092
Mehran UET, Jamshoro



Mehran University of Engineering & Technology, Jamshoro



Information Communication & Processing Center

Internet Access Account Request Form

Full Name (in caps)	
Father's Name	
*CNIC #:	
*E-mail Address (if any)	
Job Title (for Employees) Roll No: (for students)	
Department	
Intercom No: (if any)	
*Mobile Number:	
Date of Submission:	

Signature

Chairman / Director / Sectional Head

Note:

1. Students are required to attach the copy of MUET ID card along with this form. Enrollment card or admission letter are also acceptable in place of the ID card.
2. Internet Access Account will be communicated to the concerned via E-mail Address.

Office use only -----

Internet Access User Id: _____

Date of Issue Account: _____

Assistant Manager IT

Manager Systems, ICPC

Information & Communication Processing Center (ICPC)
+92 (22) 2772250-73 Ext.2692
Mehran UET, Jamshoro



MUET LIBRARY & ONLINE
INFORMATION CENTER, JAMSHORO



LIBRARY MEMBERSHIP FORM

New Card Duplicate Card Term Back / COT

Roll No: _____

Name: _____

S/o, D/o _____

CNIC/ B Form _____

Email: _____

Contact: _____

Address: _____

Membership Challan No: _____ Date: _____

Book Bank Challan No: _____ Date: _____

 Signature of Candidate

 Signature of Director / Chairman
 or his Nominee

Required Documents for the Library Card:

1. Photocopy of Admission Letter.
2. Photocopy of CNIC or Form "B".
3. Two Photograph 1" X 1".
4. Bank Challan of Rs. 200/=, Available at Help Desk.
5. Bank Challan of Rs. 100/=, for Book Bank (Optional) Available at Help Desk.



**MEHRAN UNIVERSITY of
ENGINEERING & TECHNOLOGY, JAMSHORO**

**Microsoft Academic Alliance (DreamSpark)
Account Request Form**

Please fill all the fields given below:	
Name	
E-mail Address	
Job Title / Roll No:	
Department	
Intercom No:	
Mobile Number:	

Signature

Chairman / Director / Sectional Head

Note: Students are required to attach the copy of MUET ID Card along with this form. Enrollment card or Admission letter are also acceptable in place of the ID card.

Office use only

Decision	
<input type="checkbox"/> Approved	<input type="checkbox"/> Rejected
Justifications	

Concerned Engineer

Coordinator Microsoft Products



**MEHRAN UNIVERSITY
OF ENGINEERING & TECHNOLOGY, JAMSHORO**



**DIRECTORATE OF ADMISSIONS
SMARTENROLMENTCARD REGISTRATION FORM**

Name (in Block Letters)										New Card (V) Appropriate <input type="checkbox"/>		Duplicate <input type="checkbox"/>	
Father's Name										Surname			
CNIC No.													
Passport No.										Nationality			
Country of Issue										Date of Birth			
Address													
City										Province			
Country										Post Code			
Email										Phone			
Last Examination Passed										Year of Passing			
Department													
Programme (V) Appropriate		UG		PG		MPhil/PhD.		Date of Admission					
Roll No.										Blood Group:			

Note: Please attach attested copy of HSI Marks Certificate /DAE/Equivalence Certificate

Signature of Applicant

Chairman / Director

For Office use only

Name : _____ Roll No : _____ Enrollment No : _____

Date of submission of Enrollment Registration form : _____ Date of Issuance : _____

Deputy Registrar

Director Admissions

Receipt Acknowledgement

Expected Card Delivery Date: _____

This is to acknowledge that Mr./Ms./Mrs. _____ of Department _____ bearing Roll No. _____ has submitted his/her form.

Received by:
(Superintendent concerned Department)



MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY
DIRECTORATE/INSTITUTES OF -----

ISO9001 Certified

RESEARCH PROPOSAL FOR Ph.D/M.Phil leading to Ph.D/M.Phil /M.E/M.S/M.CRP /MBA (Full-time/Part-time)

1. Department/Program -----
2. Faculty -----
3. Name of Student -----
4. Student Roll No. -----
5. Student National Identity Card No. -----
 (Foreign Student may please give Passport No)
6. Current Mailing Address: -----

7. Telephone No. -----
8. Current Email Address -----
9. Major Field of Study -----
10. Course Work Result -----
 (CGPA or average %age of Marks)
11. Name of Supervisor -----
12. Name of Co-Supervisor -----
13. Proposed Title of Thesis -----

14. Research Proposal was conceived by a) Supervisor b) Both Supervisor & student c) student
15. Is the proposed research work in the major field of study? (Use separate sheet elaborating reasons for selecting research work in a field other than major field)

	No.	Yes.
--	-----	------
16. Proposed date of start of research work -----
17. Probable date of completion of Thesis -----
18. Place where research will be conducted -----
19. If the place where the research is to be Conducted is other than MUET, Jamshoro -----
 give reasons for selecting the place of research. -----
20. Nature of research work

Experimental	Analytical	Both Experimental and Analytical.
Other	Specify _____	
21. Are the required research facilities (Equipment, Material, etc.) at the place of research?

Fully available	Partially available	Not Available at all
-----------------	---------------------	----------------------

(Give on separate sheets the details i.e. Cost of the material, equipment etc. required) Page -----

19. Is any out-of-town travel required for the research work such as collection of data, materials?
No. Yes. (Give on separate sheet the details i.e. cost of travel) Page --

20. Is any expenditure required to be incurred on miscellaneous items?
No. Yes. (Give on separate sheet the details of such expenditure) Page -----

21. Give brief description (Synopsis), Justification and Scope of the proposed research work on separate sheets. Indicate, if possible, the practical use of the probable results of the research work related to National Development. Page -----

25. Are any bottlenecks anticipated in doing the research work?
No. Yes. (Indicate such bottlenecks on a separate sheet) Page _____

SIGNATURES

(Student) (Co-Supervisor) (Supervisor) (Chairman/Director/
Co-Director/Focal Person
Deptt./Institute/Program _____
)

DIRECTOR
DIRECTORATE/INSTITUTE OF

DEAN,
FACULTY OF



Contact:

U.S.-Pakistan Center for Advance Studies in Water

Mehran University of Engineering and Technology,

Jamshoro-76062, Sindh - Pakistan

 92-22-277 1226 |  water.muuet.edu.pk

 /USPCASW |  USPCASW_MUET