BALOCHISTAN UNIVERSITY OF INFORMATION TECHNOLOGY ENGINEERING & MANAGEMENT SCIENCES
2002
رَبِّ زِدْنِي عِلْمًا

BUITEMS

QUALITY & EXCELLENCE IN EDUCATION

HUB for SDG8

UNITED NATIONS academic impact

2018-2021-2024

ANNUAL REPORT 2020-2021

Our Vision

To be among the leading universities of the world - accessible to all, imparting quality education and promoting cutting edge research.

Mission Statement

At **BUITEMS**, we are committed to providing quality education with focus on research and to equip students with the art of living as productive members of society, contributing to the socio-economic uplift of Pakistan in general, and Balochistan in particular.

Our Goals

- To provide outstanding academic programs that further strengthen our performance, pre-eminence and efficiency.
- To provide an excellent teaching and learning environment to students to reach a level that matches the atmosphere prevailing at best universities in the world.
- To raise revenues from partnerships, research grants and technology transfer while strengthening our ability to more effectively invest and allocate resources for education.

Our Core Values

Accountability: We are committed stewards of the human, fiscal and physical resources entrusted to us.

Diversity : We recognize that diversity leads to excellence, enhancing our teaching, scholarship and service as well as our ability to respect and interact with people.

Integrity : We practice honesty, truth and integrity in all that we do.

Respect: We treat each other with civility, dignity and respect.Social We contribute to intellectual, cultural, spiritual and economic well-being responsibility: of the society.

Social Responsibility: We contribute to intellectual,cultural, spiritual and economic well-being of the society.

Foreword

Covid-19, the global pandemic wreaked havoc throughout the world. This may sound harsh, but it is easy to feel buried by our circumstances. A farmer while planting new plants sow the seeds. Did the farmer bury the seed? The affirmative response can be contrasted by that he also planted it. Instead of feeling buried by our situation, we must realize that the pain and heartache that have been piled upon us are not meant to bury, but to plant us in a way that will allow us to grow and prosper into who we are meant to be.

Learning during the time of pandemic came with a lot of surprises and challenges and thus it has been different from the past years. In Spring 2020, BUITEMS commenced its uninterrupted learning program and started with undergraduate courses being offered virtually due to the COVID-19 pandemic, most faculty professional staff and students attended lectures from home instead of gathering on campus. But then again, learning during the time of pandemic has been something unlike ever before.

Amid a global pandemic, the teachers, admin and university authorities came up with an array of creative and meaningful ways to contribute to society productively. Oprah Winfrey rightly says, “The greatest discovery of all time is that a person can change his future by merely changing his attitude”.

BUITEMS has been committed to its aim of providing quality and excellence in education, even during the contagion, the university initiated and transitioned to the online mode of teaching. As coronavirus spread across the country, classes moved online.

BUITEMS expects that change in the attitude of its students and graduates and anticipates the same dedication, readiness and adaptability during such uncertain and unprecedented time. Our students fueled by their dedication to identifying solutions to the world's biggest problems through innovative research and critical thinking are our most precious assets. The seeds of dedication, hard work, commitment, determination and service have been well planted in our students, it is now up to them to allow themselves to grow and prosper as individuals and to serve in their respective fields with utmost responsibility and honesty.

With the virtual mode of learning, BUITEMS has formally stepped into the era of digitalization, we, therefore, hope to outshine in the virtual world with the same zeal and vigour. BUITEMS, today is in compliance with the norms, standards and quality of global academia by providing uninterrupted learning at the doorsteps to the students.

Ahmed Farooq Bazai S.I
Vice Chancellor

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Introduction

The Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS) today stands as an emblem of quality education in the country. This distinction, when viewed from the perspective of just eighteen years of the existence of the university is something dazzling. From a modest beginning in a small building in Jinnah Town, the university has now assumed the dimensions of a sprawling multi-campus conglomerate comprising six faculties and numerous related offices and directorates.

BUITEMS today is a center for several national and international projects. In fulfilling its mission, BUITEMS aims for academic excellence and seeks to enhance its institutional capacities from partnerships, research, grants, and technology transfer. The NIC, located on campus, is a pro-innovation hub and business accelerator that provides a platform for budding entrepreneurs to demonstrate their talent and passion to solve the problems of the province and beyond.

In recognition of the research, innovation and scholarship undertaken in support of Sustainable Development Goal (SDG), United Nations Academic Impact selected BUITEMS as its hub for Sustainable Development Goal 8 i. e Decent Work and Economic Growth.

An International Centre for Refugees and Migration Studies (ICRMS) in collaboration with United Nations High Commissioner for Refugees (UNHCR) has been established that is responsible for the provision of training for refugee teachers and opportunities for entrepreneurship/business studies for refugee students in the university.

As a leading higher education institute in the country, BUITEMS has the responsibility to play its effective and productive role in the betterment of the community. It is with this aim in mind that a Decentralized Wastewater Treatment Systems (DEWATS) in collaboration Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Bremen Overseas Research & Development Association (BORDA) Germany and Balochistan Rural Support Program (BRSP) has been constructed.

Amid the global pandemic, BUITEMS assumed the role of a frontline institute in the province to transition to an online mode of learning in no time by acquiring an MS Teams license. BUITEMS has been restoring hope in society even during the COVID 19 pandemic.

We hope to see the same growth and commitments in the years to come. May our pure intentions to serve the country be fruitful. Aameen

BUITEMS SENATE

The BUITEMS Senate, a statuatry body, delibrates upon University-wide policies, practices and structure. The perimeter of constituent issues pertaining to academic programs, human capital, budget, infrastructure and professional, educational and community relations of the University fall under the purview of the strategic mandate of the body.

Chairman
Syed Zahoor Ahmed Agha
Governor Balochistan/
Chancellor BUITEMS

Member
Ahmed Farooq Bazai (SI)
Vice Chancellor
BUITEMS

Member
Dr. Faisal Ahmed Khan
Pro Vice Chancellor
BUITEMS

Member
Syed Jamal Shah
Director General, PNCA

Member
Ms. Raheela Hameed Durrani
Ex. Speaker of Provincial
Assembly of Balochistan

Member
Mr. Asghar Khan Achakzai
MPA, Provincial Assembly
Balochistan

Member
Dr. Rubaba Khan Buledi
MPA, Provincial Assembly
Balochistan

Member
Mr. Shahnawaz Ali
Principal Secretary to
Governor

Member
Prof. Dr. Hashmat Sarosh Lodhi
Vice Chancellor
NED, University

Member
Dr. Muhammad Aslam
Rector Pakistan Institute of
Engineering & Applied Sciences
Islamabad

Member
Mohammad Hashim Ghilzai
Secretary Colleges, Higher &
Technical Education

Member
Qazi Maqbool Ahmed
Additional Director (RTD)
CNS/APS

Member
Dr. Masoom Kasi
Professor, Quetta Institute of
Medical Sciences

Member
Dr. Zafar Baloch
Professor, Faculty of FOE&A,
BUITEMS

Member
Dr. Bushra Naeem
Associate Professor
BUITEMS

Member
Ms. Nida Zafar
Chairperson Management
Sciences, SBKWU

Member
Dr. Anjum Pervaiz
Ex-Registrar, SBKWU Quetta

Secretary
Mr. Jamal Mustafa
Registrar, BUITEMS

BUITEMS SYNDICATE

BUITEMS Syndicate is the apex executive body of the University, assigned to take effective measures to raise the standard of teaching, research and publications and other academic pursuits and exercises general supervision over the affairs and the property of the University.

Chairman
Ahmed Farooq Bazai (SI)
Vice Chancellor
BUITEMS

Member
Dr. Faisal Ahmed Khan
Pro Vice Chancellor
BUITEMS

Member
Dr. Kamran Sami
Dean/ Professor Faculty of Engineering, BUITEMS

Member
Dr. Syed Munawar Shah
Dean Faculty of Management Sciences, BUITEMS

Member
Dr. Nazeer Ahmed
Dean Faculty of Life Sciences and Informatics, BUITEMS

Member
Dr. Raheela Umar
Dean Faculty of Social Sciences & Humanities, BUITEMS

Member
Dr. Bakhtiar Kasi
Dean Faculty of Information & Communication Technology
BUITEMS

Member
Dr. Zahid Rauf
Dean Graduate Studies, BUITEMS

Member
Dr. Muhammad Saeed
Professor Faculty of Life Sciences and Informatics, BUITEMS

Member
Dr. Muhammad Mushtaq
Professor Faculty of Life Sciences and Informatics, BUITEMS

Member
Dr. Naeem Shahwani
Dean Faculty Basic Sciences, BUITEMS

Member
Dr. Syed Muhammad Khair
Professor Faculty of Management Sciences, BUITEMS

Member
Dr. Zainab Bibi
Professor
University of Balochistan

Member
Dr. Fariha Saeed
Professor
University of Balochistan

Member
Dr. Bhawani Shankar Choudhary
Professor
Mehran UET Jamshoro

Member
Mr. Ghulam Mujtaba Jonejo
Controller of Exminations, BUITEMS

Member
Mr. Baber Faiz
Treasurer, BUITEMS

Secretary
Mr. Jamal Mustafa
Registrar, BUITEMS

BUITEMS SELECTION BOARD

Performance of employees basically determines the rate of success in any organization. BUITEMS have a fully authorized selection board which follows the principles of transparency and merit while appointing staff /officers at any position. The skills and abilities of our selection board are reflected in the employees of our University.

Chairman
Ahmed Farooq Bazai (SI)
Vice Chancellor
BUITEMS

Member
Dr. Ehsan Ullah Kakar
Vice Chancellor
BUET, Khuzdar

Member
Dr. Dost Muhammad Baloch
Vice Chancellor
LUWAMS, Uthal

Member
Dr. Faisal Ahmed Khan
Pro Vice Chancellor
BUITEMS

Member
Prof. Dr. Mudassir Asrar
Member Balochistan Public Service Commission, Quetta

Member
Dr. Kamran Sami
Dean/ Professor Faculty of Engineering, BUITEMS

Member
Dr. Jan Muhammad
Dean Faculty of Arts and Basic Sciences, BUITEMS

Member
Dr. Syed Munawar Shah
Dean Faculty of Management Sciences, BUITEMS

Member
Dr. Naeem Shahwani
Dean Faculty Basic Sciences, BUITEMS

Member
Dr. Bakhtiar Kasi
Dean Faculty of Information & Communication Technology
BUITEMS

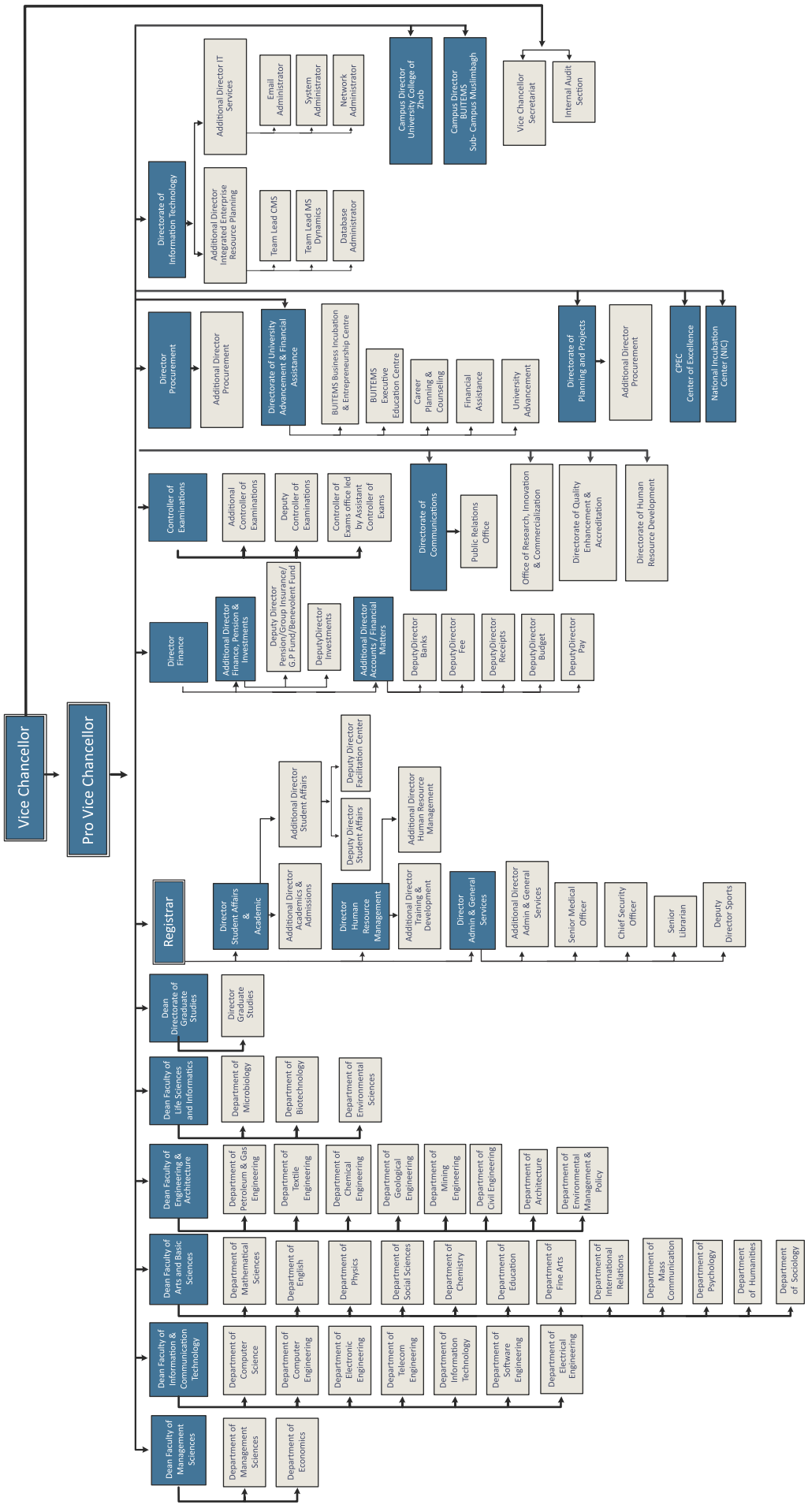
Member
Dr. Fariha Saeed
Professor
University of Balochistan

Member
Dr. Zahid Rauf
Dean Graduate Studies,
BUITEMS

Member
Dr. Raheela Umar
Dean Faculty of Social Sciences & Humanities,
BUITEMS

Secretary
Mr. Jamal Mustafa
Registrar, BUITEMS

ORGANOGRAM OF THE UNIVERSITY



FACULTY & STUDENT STRENGTH

Faculty Strength

Teaching Faculty Positions till December- 2020

Faculty of Information and Communication Technology

S.No.	Name of Department	No. of Faculty Members
1	Electronic Engineerring	18
2	Computer Science	27
3	Computer Engineerring	16
4	Information Technology	12
5	Telecom Engineerring	20
6	Software Engineerring	08
7	Electrical Engineerring	17
	Total	**118**

Faculty of Management Sciences

S.No.	Name of Department	No. of Faculty Members
1	Management Sciences	59
2	Economics	32
3	Public Administration	0
	Total	**91**

Faculty of Life Sciences & Informatics

S.No.	Name of Department	No. of Faculty Members
1	Biotechnology & Informatics	32
2	Environmental Science	20
3	Microbiology	15
	Total	**67**

Faculty of Engineering & Architecture

S.No.	Name of Department	No. of Faculty Members
1	Mechanical Engineering	08
2	Chemical Engineering	22
3	Textile Engineering	15
4	Mining Engineering	16
5	Geological Engineering	11
6	Petroleum & Gas Engineering	15
7	Civil Engineering	34
8	Architecture	20
9	Textile & Fashion Design	03
	Total	**144**

Faculty of Basic Sciences

S.No.	Name of Department	No. of Faculty Members
1	Mathematics	34
2	Physics	18
3	Chemistry	16
	Total	**68**

Faculty of Social Sciences & Humanities

1	International Relations	16
2	Mass Communication	10
3	English	29
4	Sociology	14
5	Psychology	10
6	Fine Arts	12
7	Education	06
8	Pakistan Studies	11
9	Islamic Studies	12
	Total	**120**
	GRAND TOTAL	**608**

Student Strength

Faculty wise enrolled students till (Fall-2020)

Faculty of Engineering & Architecture

Department	Male	Female	Total
Civil Engineering	426	39	465
Petroleum & Gas Engineering	330	08	338
Mechanical Engineering	238	04	242
Mining Engineering	328	02	330
Geological Engineering	184	08	192
Textile Engineering	218	13	231
Chemical Engineering	360	10	370
Architecture	165	64	229
BS Fashion and Textile Engineering	22	87	109
Total	**2271**	**235**	**2506**

Faculty of Information & Communication Technology

Department	Male	Female	Total
Electrical Engineering	485	23	508
Electronics Engineering	556	73	629
Software Engineering	302	40	342
Computer Engineering	415	48	463
Telecommunication Engineering	529	26	555
Information Technology	426	56	482
Computer Science	421	110	531
Total	**3134**	**375**	**3510**

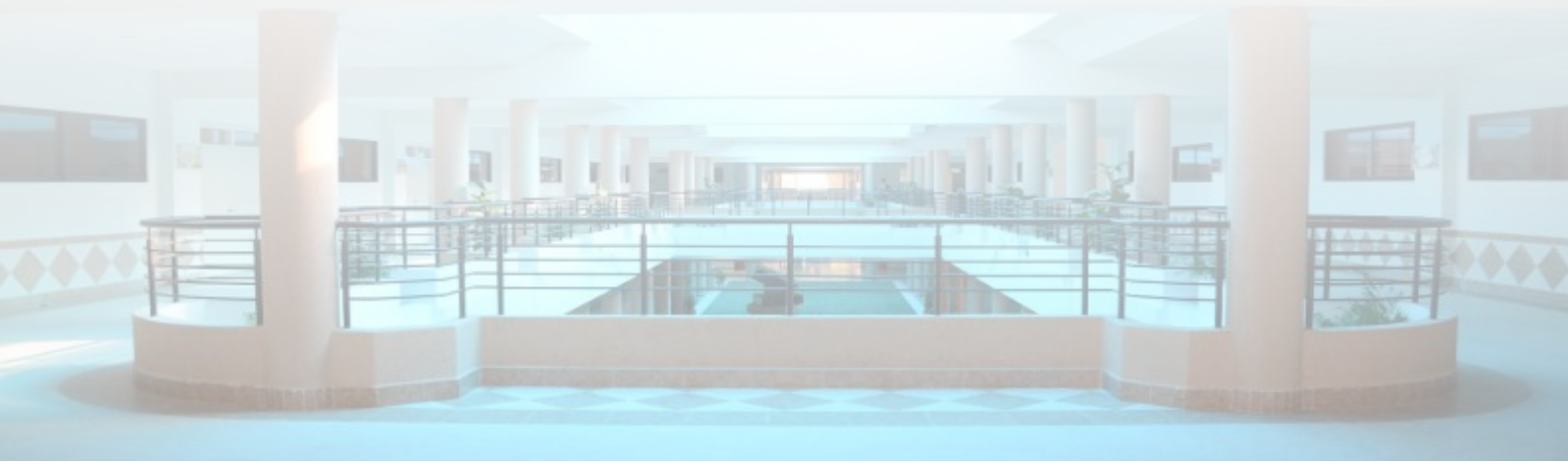
Faculty of Basic Sciences

Department	Male	Female	Total
Mathematics	126	37	163
Physics	178	35	213
Chemistry	77	33	110
Total	**381**	**105**	**486**

Faculty of Social Sciences & Humanities			
Department	Male	Female	Total
Mass Communication	266	62	328
International Relations	364	54	418
English	258	88	346
Fine Arts	51	77	128
Sociology	177	37	214
Education	120	54	174
Psychology	68	119	187
Total	1304	491	1795

Faculty of Management Sciences			
Department	Male	Female	Total
Management Sciences (MS, PhD)	111	31	142
Management Sciences (MBA)	546	135	681
Bachelor of Business Administration	783	182	965
Economics	430	50	480
Public Administration	174	37	211
Total	204	435	2479

Faculty Life Sciences & Informatics			
Department	Male	Female	Total
Biotechnology & information	313	166	479
Microbiology	173	113	286
Environmental Science	163	61	224
Environmental Management & Policy	35	07	42
Total	648	347	1031
Grand Total	9818	1989	11807




2021
2020
2018
2016
2014
2012

Academic Milestones

Celebrating the 18th Anniversary of BUITEMS, and the World Teachers' Day

BUITEMS celebrated its 18th anniversary on October 5, 2020, the World Teachers' Day is being celebrated on the same date every year. The worthy Vice Chancellor BUITEMS, Mr Ahmed Farooq Bazai in his message on this auspicious occasion congratulated the BUTIEMS family. He added that as we complete these 18 vibrant, productive, and fruitful years, our determination with the cause of education is on a constant rise. During the past eighteen years, the University has achieved a prestigious place among the leading institutions of higher learning in Pakistan through the hard work and selfless devotion of all its stakeholders. The celebration of this event is a significant occasion for BUITEMS, as the journey of the University towards attaining international recognition is gaining pace.

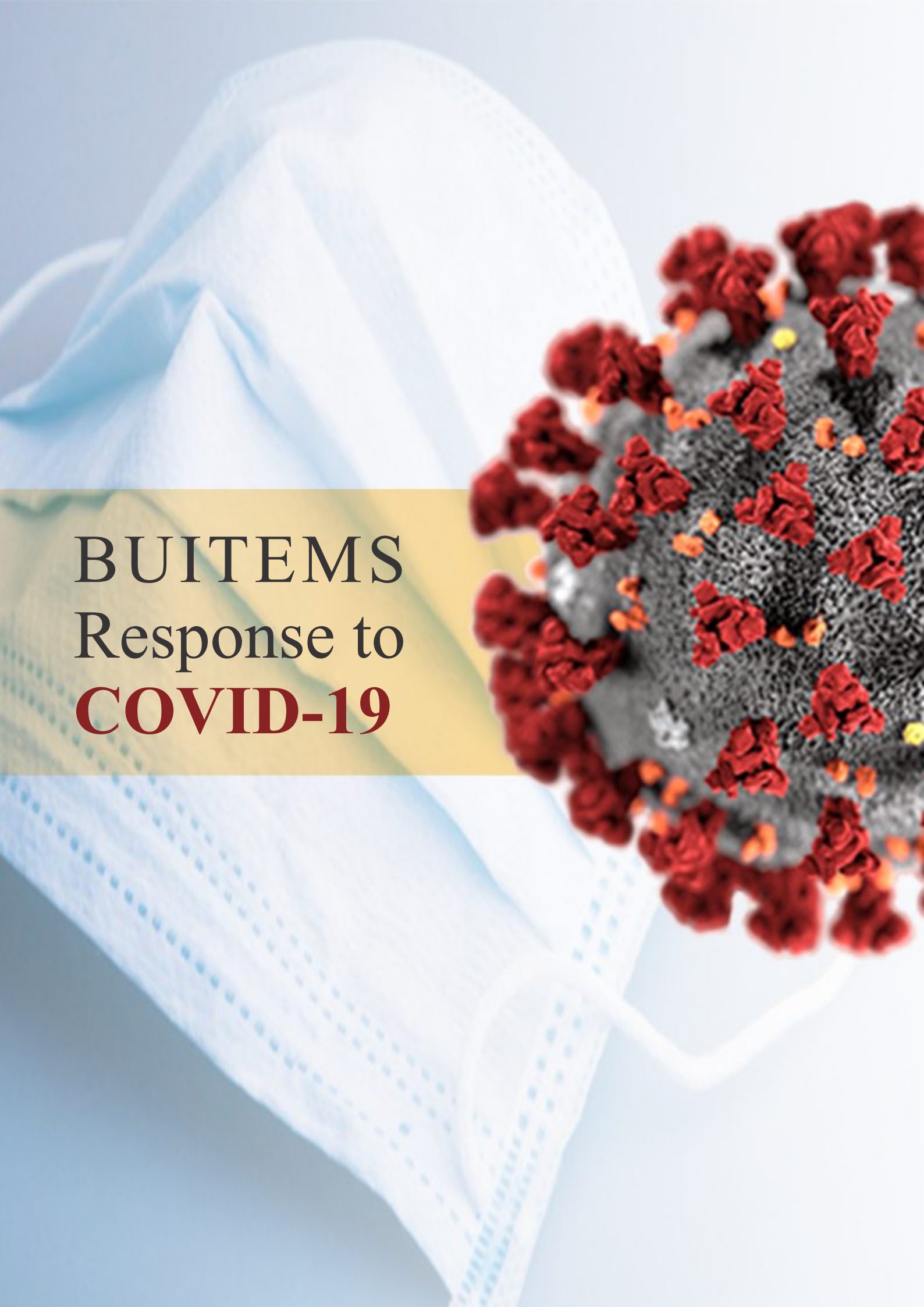
Teachers are among the many factors that shape a positive society and influence learning. They help students think critically, process information from several sources, work cooperatively, tackle problems, and make informed choices. It takes more than an education to make a great teacher, it takes care, dedication, and determination to what you believe in. The honourable Vice Chancellor urged BUITEMS teachers to rededicate for realizing a closer fellowship among our students and express the leavening effect in the community with even higher morale and passion.

The University's persistent efforts to create a stimulating educational environment for its students have resulted in significant achievements of BUITEMS.

CONVOCATIONS

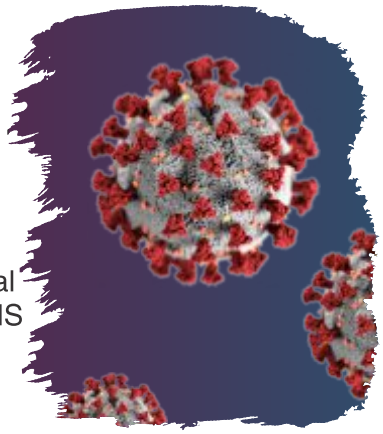
Convocation	Date	Governor Balochistan / Chancellor BUITEMS	
1st Convocation	*28th April 2006*	*Owais Ahmed Ghani*	
2nd Convocation	*30th November 2006*	*Owais Ahmed Ghani*	
3rd Convocation	*5th December 2007*	*Owais Ahmed Ghani*	
4th Convocation	*16th December 2008*	*Nawab Zulfiqar Ali Magsi*	
5th Convocation	*5th January 2010*	*Nawab Zulfiqar Ali Magsi*	
6th Convocation	*8th December 2010*	*Nawab Zulfiqar Ali Magsi*	
7th Convocation	*24th January 2012*	*Nawab Zulfiqar Ali Magsi*	
8th Convocation	*26th December 2012*	*Nawab Zulfiqar Ali Magsi*	
9th Convocation	*31st December 2013*	*Muhammad Khan Achakzai*	
10th Convocation	*3rd December 2014*	*Muhammad Khan Achakzai*	
11th Convocation	*10th December 2015*	*Muhammad Khan Achakzai*	
12th Convocation	*22nd December 2016*	*Muhammad Khan Achakzai*	
13th Convocation	*14th December 2017*	*Muhammad Khan Achakzai*	
14th Convocation	*20th December 2018*	*Justice (Retd) Amanullah Khan Yasinzai*	
15th Convocation	*19th December 2019*	*Justice (Retd) Amanullah Khan Yasinzai*	
16th Convocation	*30th December 2020*	*Justice (Retd) Amanullah Khan Yasinzai*	


VACCINE
COVID-19
2.5
2
1.5
1
0.5



BUITEMS Response to COVID-19

BUITEMS Response to Pandemic Covid-19



COVID-19 has halted the global, social and economic progress — challenging 21st Century lifestyle and workplace practices thus impacting the conventional institutional arrangements. BUITEMS is being affected likewise; however, the farsighted leadership along with the BUITEMS family immediately realized the challenge thrown at them and as an essential pillar of the society it adopted effective counter strategies and planning in coordination with regional, local, and national authorities. As an immediate response to the pandemic understanding the gravity of the situation and its consequences; BUITEMS leadership started with the closure of all its facilities for faculty, students and staff, however ensuring that the learning process and research activities continue; BUITEMS stands together with the global community to fight Covid-19 and plays its role in continuing the learning processes and research; supporting the government with policy frameworks; encourage other educational institutions to continue online education and support them in the process; collaborate with national, regional and international educational institutions. BUITEMS has managed to mitigate the academic loss and psychological burden of students and employees in these difficult times. Initially, to handle uncertainty and mitigate the psychological impact upon students and employees only two weeks closure was announced—during this time employees received salaries ensure job security for the employees.

Meanwhile, to create a virtual workspace BUITEMS signed an agreement with Microsoft and issued accounts to all students and employees. Microsoft Office 365 (O365) accounts were acquired and training on the effective use of Microsoft Teams (MT) for online classes was imparted to all Deans and Department Chairs. The Department Chairs then extended the training to all their faculty members and students. Standard Operating Procedures (SOP) were developed on developing classes in Microsoft Teams, assigning course titles, course description, assignments, quizzes, exams and attendance. Simultaneously, Classes in Microsoft Teams were synchronized with the previously operational Campus Management System (CMS).

BUITEMS realized that internet connectivity, cost and adaptability to the new working environment will be a challenge and would require a resolve for the successful conduct of online classes— especially when such arrangements were never practised. Before announcing online classes BUITEMS convinced its undergraduate final year students to opt for online classes—as it will save them precious time.

Faculty of Engineering & Architecture's Response to COVID-19 Production of Low-Cost Disinfectant and Hand Sanitizer

In the wake of COVID-19, Dr. Muhammad Amin from the Department of Chemical Engineering along with the Dean FOE&A, Dr. Kamran Sami, introduced low-cost hand sanitiser and disinfectant. This disinfectant has been given to the Municipal committee of Quetta city and BUITEMS for spraying at public places to reduce the risk of virus spread. The worthy Vice Chancellor, BUITEMS and Pro-Vice-Chancellor appreciated the efforts of the Department for such constructive activities and motivated the team to continue the good work.

HAZMAT suit- A protective tool against COVID-19

Department of Textile Engineering, FOE&A developed the Personal Protective Equipment (PPE) material based low-cost HAZMAT suit in the wake of COVID. Moreover, the project has been submitted to the Government of Balochistan. The Vice-Chancellor, BUITEMS and Pro-Vice-Chancellor appreciated the efforts of the Textile Engineering team for their contribution.

COVID-19 Fund raising for Community

Dr. Syed Kamran Sami, Dean FOE&A presented the idea to raise fund for the people in the community who suffered the most during the pandemic upheaval. The idea was appreciated by the faculty members who generously contributed to funding collection. Ration and clothes were purchased and distributed among the deserving families in Quetta city.

Faculty of Information & Communication Technology's Response to COVID-19

COVID-19 pandemic hit the world early this year and posed unprecedented challenges for even the most advanced countries of the world. COVID-19 poses manifold challenges for an underdeveloped country like Pakistan with a thriving economy. Pakistan is faced with serious challenges including health care, socio-economic issues, lack of infrastructure for distance learning, and for supporting work from home. To address some of these challenges the FICT undertook different initiatives as detailed below:

Balochistan Command and Operation Center Think Tank Team

In wake of the COVID-19 pandemic, the Government of Balochistan established a special cell: Balochistan Command and Operation Center (BCOC) under the chief secretary office. The centre is assisted by think tanks of university professors who guide the BCOC on strategic decisions regarding the spread of the pandemic and on devising effective policies for smart lockdowns. The team of think tanks from BUITEMS include Dr. Bakhtiar Kasi, Dean FICT, Dr. Syed Attique Shah, Chairperson, Department of Computer Science, and Dr. Abdus Salam Lodhi Director, University College, Zhob, UCoZ, BUITEMS. Over the last couple of months, the think tank team from BUITEMS attended several key meetings of BCOC which were chaired by the Chief Secretary Balochistan and by Chief Minister Balochistan. BUITEMS think tank team assisted the Government by making informed policy recommendations on daily basis regarding effective lockdown policy, COVID-19 predictions, health care, and the economic effects of COVID-19 in the province. Through this forum, the data and recommendations are shared with all necessary stakeholders at provincial levels as well as the national levels including the departments of Health, Local Administration, and PDMA.

BUITEMS VENT-I:

Dr. Anayat Baloch, Chairperson Department of Electronic Engineering, along with his team developed a prototype of an indigenously built Ventilator "BUITEMS VENT-I". Their prototype incorporated all national and international standard requirements for the treatment of COVID-19 patients as enlisted. The ventilator was being tested by the Drug Regulatory Authority of Pakistan (DRAP) for level-I use.

Trace Together App

A team of developers led by Dr. Bakhtiar Kasi, Dean FICT and Dr. Mumraiz Kasi, Associate Professor, Department of Computer Science developed a smart application named “TraceTogether” to combat COVID-19 spread. The application uses Bluetooth technology to keep track of all contacts who have come in close contact with a potentially affected person over a while. So, by using this application if someone in the contact list gets infected by a virus then the information of the affected patients is shared with the contacts who have recently been in close

contact with the affected patients. Currently, an android version of the app is available which is being tested under different scenarios. The ios version is still being developed by the team and will be made available soon.

Faculty of Life Sciences and the COVID-19 Pandemic

The faculty of Life Sciences at BUITEMS, realizing its responsibility in the post-COVID-19 scenario, duly contributed at various fronts. To start with, complying with their primary responsibility, they swiftly adopted the online mode of teaching ensuring at the same time that the quality of education is not compromised.

On the research front, several grant proposals on COVID-19 were submitted to various funding agencies including Ignite, Pakistan Science Foundation (PSF), Higher Education Commission (HEC) and Provincial Government. Besides, BUITEMS, Allama Iqbal Medical University, Technical University Munich, Germany and Paderborn University Germany jointly worked to Identify potentially effective Food & Drug Administration (FDA) approved drugs for repurposing against SARS-CoV-2 by combined deep learning and molecular docking simulations approaches.

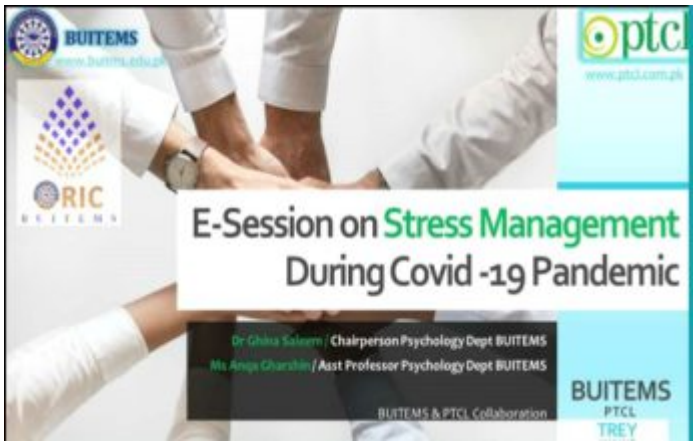
The Life Sciences faculty also played an active role in assisting policymakers on COVID-19 related issues. The faculty extended technical support/ expertise to the Government in establishing COVID-19 diagnostic labs in different districts of the province. In the initial months of the pandemic, experts from the faculty remained involved in Polymerase Chain Reaction (PCR) based testing of the Novel Corona Virus disease at Quetta.

COVID-19 and Higher Education: The Path Forward After the Pandemic

During the COVID-19 pandemic, the United Nations Academic Impact (UNAI), a United Nations initiative to align institutions of higher education, arranged higher education series of discussions for students, educators and researchers in different parts of the world to find out how COVID-19 has affected them and how they are coping with the changes. Some key points published on July 8, 2020, from the interview with coordinator UNAI hub 8, BUITEMS, Dr. Bushra Naeem talked about how the unexpected closure of the campus presented challenges for both faculty and students as they had to quickly switch to distance learning. According to Dr. Bushra Naeem, the pandemic has been a psychological shock for everyone, and educators are not only responsible for teaching courses and ensuring learning outcomes, but also for counselling students who are dealing with the loss of normalcy and their campus community. Dr. Bushra Naeem believes that people will have a greater appreciation for things they previously took for granted before and maintain a better work-life balance.

E-Session on Stress Management during COVID-19 Pandemic to Pakistan Telecommunication Company Limited (PTCL) by ORIC BUITEMS

An 'E-Session on Stress Management during COVID-19 Pandemic', was conducted on May 16, 2020, under a training exchange program collaboration of PTCL and BUITEMS. The keynote speakers for the session were Dr. Ghina Saleem, Chairperson Psychology department and Ms. Anqa Gharshin, Assistant Professor Psychology department from BUITEMS.The E-Session was carried for three long hours along with a question and answer session on Microsoft Teams. Concepts for tackling stress were presented, firstly Dr. Ghina Saleem emphasized causes of stress, its symptoms, action-focused coping, and emotion - focused coping techniques. While Ms. Anqa Gharsh in came up with some methodologies and relaxation techniques.



Annual Online INVENTION TO INNOVATION SUMMIT-2020 Global Technologies and strategies for COVID-19 Challenges

Annual Online Innovation Summit (AOIS) is a technology exchange focused event that takes place annually virtually worldwide. AOIS is an annual event to exhibit industry-driven ideas, products, and technologies in front of industry experts at the national and international level.

In this context Dr. Mujtaba Ellahi, Assistant Professor from Department of Chemistry, BUITEMS presented his presentation, “Epoxy Resin Based Smart Glass Technology Use to Virus Covid-19 challenges” on Annual Online INVENTION TO INNOVATION SUMMIT-2020 Global Technologies and Strategies for COVID-19 Challenges September 18-19, in collaboration with research group including Syed Usman (University-Industry Linkages and Technology Transfer), Ms. Mehak Iqbal, and Mr. Hamza Majeed.

1st International Symposium on Building Economic Resilience against Pandemics

BUIETMS in partnership with United Nations Academic Impact (UNAI) on October 27, 2020, arranged it's the 1st International Symposium on Building Economic Resilience against Pandemics. The symposium was led in association with the UNDP, Government of Balochistan, IEEE Quetta Subsection, and IEEE Women in engineering, Karachi Section.The Virtual symposium was intended at inaugurating discourse on building economic resilience against pandemics. There were 12 research papers focused around 4 specific areas: First, wages and labour remuneration amid pandemics, fiscal stability, and economic zoning for sustainable development of Balochistan; second, Monetary and fiscal intervention, parallel economy—Balochistan economy and the impacts of PM Ehsaas Programs; third, Balochistan economy, economic zoning of Balochistan for sustainable development, and impacts of lockdowns on decent work; four, Health & labour productivity amid economic crisis parallel economy, wages, and labour remuneration, and monetary and fiscal policy interventions. The sessions were chaired by Dr. Manzoor Ahmed, Dr. Abidullah, Dr. Muhammad Jamil, and Dr. Zaheer Abbas, respectively, that were presented along with 3 keynote speakers Dr. Joachim Von Braun from Germany, Dr. Adil Najam from the United States of America, and Dr. Aqdas Afzal Pakistan. Live participation from academic world, public sector and international organizations reached above 100 on the Zoom platform. The event was live-streamed on Facebook, where several people were reached.

Welcome addresses highlighting the rank of academic dialogue on economic resilience against pandemics were given by BUITEMS, UNAI, and UNDP, representatives. Pro-Vice-Chancellor BUITEMS, Dr. Faisal Khan fortified collaboration amongst local, national and international organizations and stressed on global harmony and teamwork against COVID-19.

Dr. Syed Munawar Shah closed the symposium—thanking all partners, keynote speakers, presenters, and participants. The book of abstracts of presented research papers is appended in the following section.

BUITEMS
Building Leadership

Un75 (On 75th Anniversary of United Nations)

United Nations Academic Impact organized UN75 dialogue within the framework of the 75th anniversary of the United Nations (UN75). This included online conversations on compelling issues of global reach and relevance. The virtual 75 minutes webinar was held on June 8, 2020. Given the outstanding job that BUITEMS has done as SDG Hub for Goal 8 to boost entrepreneurship skills among the students as a way to foster social inclusion, the Pro-Vice-Chancellor, Dr. Faisal Ahmed Khan was invited to share the reflections on what university education can do to alleviate poverty and empower youth.

A Webinar on Artificial Intelligence (AI)

IEEE Computer Society Karachi section in collaboration with IEEE Quetta Subsection, IEEE-Student BUITEMS Branch and IEEE Women in Engineering (WIE) – MUET Student Branch Chapter arranged a webinar on the theme of “Nature Inspired Artificial Intelligence and Artificial Intelligence and Emerging Technologies”.

On June 28, 2020, a webinar was arranged with talks that covered Artificial Intelligence (AI) for individuals and commercial applications. There were 50+ participants and the keynotes were delivered by Dr. Bakhtiar Kasi and Dr. Bushra Naeem.

Meetings

Establishment of a Decentralized Waste Water Treatment Plant at BUITEMS

BUITEMS in collaboration with GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) as the funding agency, BORDA (Bremen Overseas Research and Development Association) as the technical team and BRSP (Balochistan Rural Support Programme) as a financial partner, established a "Decentralized Waste Water Treatment System" at BUITEMS Takatu Campus. A meeting held on February 27, 2020, chaired by Prof. Dr. Muhammad Naeem Shahwani, Director ORIC, regarding the initiation of the Technical Team members for DEWATS also participated in the meeting including Mr. Mamoon Ur Rasheed, Director P&P BUITEMS, Dr. Zafar Baloch, Chairperson Geological Engineering BUITEMS, Dr. Najam Malghani, Associate Professor BUITEMS and Dr. Muhammad Amin, Chairperson Chemical Engineering BUITEMS. The following points were discussed during the meeting:

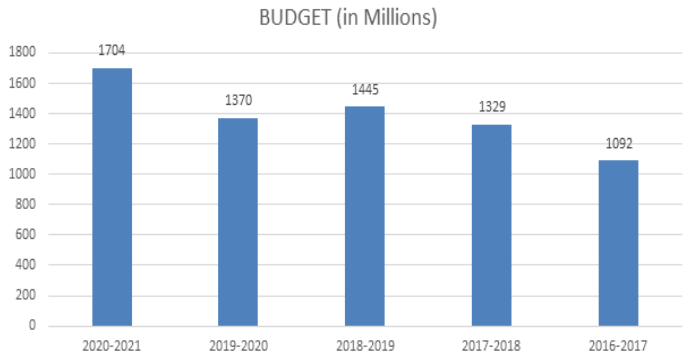
- DEWATS design, detailed drawings and bill of quantities were reflected during the meeting.
- For the final review of the DEWATS plan, a presentation was articulated by BORDA explaining all the activities to BUITEMS, GIZ and BRSP that will be taking place once the construction begins.
- Opening tendering with BRSP from 15th March.
- Based on discussion with BUITEMS the "DEWATS Engineers' Training" would be conducted on a date suitable to BUITEMS as a completed DEWATS to showcase training.
- A first draft of the DEWATS course seminar agenda for BUITEMS will be shared in March 2020.
- BUITEMS and GIZ will review and share comments in joint call till the end of March 2020.

28th Meeting of BUITEMS Finance & Planning Committee

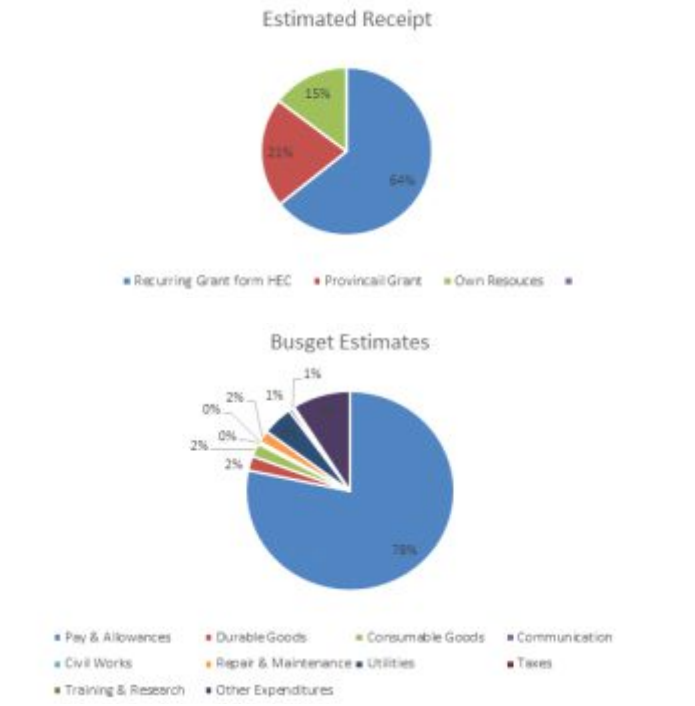
The twenty-eight (28th) meeting of the Finance & Planning Committee of the Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS) Quetta was held on July 23, 2020, under the chairmanship of the Vice-Chancellor BUITEMS at Takatu Campus. The following members attended the meeting:-

- **Mr. Ahmed Farooq Bazai,** Vice-Chancellor BUITEMS. Chairman
- **Mr. Noor ul Haq Baloch,** Secretary Finance Department, Government of Balochistan, Quetta. Member
- **Mr. Ahsan Hashmi,** Representative of Higher Education Commission (HEC), Islamabad. Member
- **Dr. Kamran Sami,** Dean Faculty of Engineering & Architecture, BUITEMS Member
- **Mr. Dara Shikoh Amir,** Director Quality Enhancement and Accreditation (QE&A), BUITEMS Non-voting member
- **Mr. Baber Faiz,** Director Finance, BUITEMS. Secretary
- **Dr.Faisal Ahmed Khan,** Pro-Vice-Chancellor BUITEMS Member
- **Mr. Tariq Bazenjo,** Deputy Director, Representative of Government of Balochistan, Information Technology Department, Quetta. Member
- **Mr. Jamal Mustafa,** Registrar, BUITEMS. Member
- **Ms. Aqsa Maryam,** Assistant Professor, Department of English, BUITEMS. Member
- **Muhammad Naeem Shahwani,** Director Research, Innovation and Commercialization (ORIC), BUITEMS Non-voting member

The Director Finance BUITEMS/Secretary BUITEMS Finance & Planning Committee with the permission of the chair presented the revised budget for the Financial Year (FY) 2019-2020 amounting to Rs.1,370.39 million and Budget Estimates for FY 2020-2021 amounting to Rs.1,703.70 Million before the BUITEMS Finance & Planning Committee. The Director Finance briefed the house that the curtail in anticipated grants from HEC and shortfall in the realization of receipt form own resources due to COVID-19 were the main causes of downward revision of the budget. The committee realized the sensitivity of prevailing financial conditions in universities of Balochistan and agreed to take the matters to HEC for consideration on priority bases. The Finance and Planning Committee recommended revised budget estimates for FY 1920-2020 and estimates for the financial year 2020-2021.



(Recurring Budget for Last 5 years)



34th Meeting of BUITEMS Syndicate

The 34th meeting of the Syndicate of BUITEMS was held on July 28, 2020, under the chairmanship of Vice Chancellor, BUITEMS at Takatu Campus. The following attended the meeting:-

- **Mr. Ahmed Farooq Bazai,**
  Vice-Chancellor BUITEMS.
  Chairman
- **Prof. Dr. Nazeer Ahmed Durrani,**
  Dean Faculty of Life Sciences and Informatics, BUITEMS.
  Member
- **Prof. Dr. Zainab Bibi,**
  Professor
  Institute of Management Sciences, University of Balochistan, Quetta.
- **Dr. Tariq Ahmed,**
  Dean Faculty of Management Sciences, BUITEMS
  Member
- **Dr. Bakhtiar Khan Kasi,**
  Dean Faculty of Information and Communication Technology, BUITEMS
- **Prof. Dr. Syed Muhammad Khair,**
  Professor, Department of Economics, Faculty of Management Sciences, BUITEMS.
  Member
- **Mr. Babar Faiz,**
  Director Finance, BUITEMS
  Member
- **Prof. Dr. Muhammad Naeem Shahwani,**
  Director ORIC, BUITEMS
  Non-voting Member
- **Mr. Jamal Mustafa,**
  Registrar, BUITEMS
  Secretary
- **Dr.Faisal Ahmed Khan,**
  Pro-Vice-Chancellor BUITEMS
  Member
- **Prof.Dr.Bhawani Shankar Chowdhry,**
  Professor Emeritus and Advisor, Mehran University of Engineering & Technology, Jamshoro
  Member
- **Prof. Dr. Jan Muhammad,**
  Dean Faculty of Arts and Basic Sciences, BUITEMS
  Member
- **Dr. Syed Kamran Sami,**
  Dean Faculty of Engineering & Architecture, BUITEMS
  Member
- **Dr. Zahid Rauf,**
  Dean Graduate Studies Office, BUITEMS.
  Member
- **Prof. Dr. Mohammad Saeed,**
  Professor, Department of Environmental Sciences, Faculty of Life Sciences & Informatics, BUITEMS
  Member
- **Mr. Ghulam Mujtaba Junejo,**
  Controller of Examination, BUITEMS
  Member
- **Syed Dara Shikoh Amir,**
  Director, Quality Enhancement & Accreditation, BUITEMS
  Non-voting Member

The Registrar BUITEMS /Secretary BUITEMS Syndicate presented the agenda items before the house for consideration. The meeting commenced with the recitation of the verses from the Holy Quran. The Vice Chancellor, welcomed all the respected members of the BUITEMS Syndicate and extended warm felicitation on behalf of the BUITEMS family.

9th Meeting of BUITEMS Senate

The 9th meeting of the Senate of Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS), Quetta, was held on August 25, 2020, under the chairmanship of the Hon'ble Governor Balochistan/ Chancellor BUITEMS at Takatu Campus BUITEMS. The following attended the meeting:

- **Mr. Justice (R) Amanullah Khan Yaseenzai,**
  Governor Balochistan/Chancellor BUITEMS.
  Chairman
- **Mr. Ahmed Farooq Bazai,**
  Vice Chancellor, BUITEMS
  Member
- **Dr. Faisal Ahmed Khan,**
  Pro Vice Chancellor, BUITEMS.
  Member
- **Ms. Raheela Hameed Khan Durrani,**
  Former Speaker of Provincial Assembly Balochistan
  Member
- **Mr. Asghar Khan Achakzai,**
  Member Provincial Assembly, Government of Balochistan
  Member
- **Mr. Hameed Ullah Nasar,**
  Additional Secretary, Colleges, Higher & Technical Education, Government of Balochistan (Represented the Secretary, GoB).
  Member
- **Dr. Anjum Pervaiz,**
  Acting Vice Chancellor/ Registrar,
  Sardar Bahadur Khan Women's University, Quetta
  Member
- **Mr. Muhammad Qaseem,**
  Additional Secretary to Hon'ble Governor Balochistan (Represented the Principal Secretary to Governor Balochistan)
  Member
- **Dr.Muhammad Aslam,**
  Rector, University of Management and Technology, Lahore (Attended online via video-conferencing)
  Member
- **Qazi Maqbool Ahmed,**
  Additional Director (Retired)' CNS/APS, Civil Aviation.
  Member
- **Dr.Masoom Kasi,**
  Professor, Quetta Institute of Medical Sciences (QIMS), Quetta.
  Member
- **Dr.Jan Muhammad,**
  Dean,/Professor, Faculty of Arts & Basic Sciences, BUITEMS
  Member
- **Dr. Bushra Naeem,**
  Associate Professor Faculty of Information and Communication Technology, BUITEMS,
  Member
- **Dr. Muhammad Naeem Shahwani,**
  Professor/Director ORIC, BUITEMS
  Non-voting Member
- **Syed Dara Shiko Amir,**
  Director, Quality Enhancement & Accreditation, BUITEMS
  Non-voting Member
- **Mr. Jamal Mustafa,**
  Registrar, BUITEMS
  Secretary

The Senate deliberated upon agenda items about academic and administrative matters of the university and made the decision accordingly. Dr. Faisal Ahmad Khan, Pro Vice Chancellor, BUITEMS delivered a detailed presentation on the progress of the BUITEMS. The Senate appreciated the efforts of the BUITEMS which resulted in imparting quality education more accessible for Balochistan in challenging circumstances. The meeting concluded with a vote of thanks to the chair.

Visits and Study Tours

PEC OBE Based Re-Accreditation Visit of Department of Civil Engineering

An Outcome-Based Education (OBE) based accreditation team of the Pakistan Engineering Council (PEC), visited the Department of Civil Engineering, BUITEMS, on January 2-3, 2020. The team included: Engr. Prof. Dr. Abdul Jabbar Sangi, NED UET Karachi, Engr. Prof. Dr. Imran Hafeez, UET Taxila and Engr. Muhammad Haroon, Representative PEC, Islamabad. The visit included an introductory meeting with the Vice-Chancellor, Pro Vice Chancellor and Dean FOE & A, Dr. Kamran Sami. The PEC team was briefed about the role and achievements of BUITEMS as well as the progress and plans of the civil engineering department by the department Chairperson Dr. Saeedullah Jan Mandokhail.

Meeting between ORIC-BUITEMS and HEC Research and Development Division

Director ORIC BUITEMS, Dr. Muhammad Naeem Shahwani met with Director General Research and Development HEC, Dr. Zainul Abdin on March 9, 2020, at HEC office Islamabad to discuss the issue of non-inclusion of BUITEMS name in the list of Research-Intensive Universities of Pakistan. Prof. Shahwani highlighted the research achievements. Director ORIC BUITEMS, Dr. Muhammad Naeem Shahwani met with Director General Research and Development HEC, Dr. Zainul Abdin on March 9, 2020, at HEC office Islamabad to discuss the issue of non-inclusion of BUITEMS name in the list of Research-Intensive Universities of Pakistan. Prof. Shahwani highlighted the research achievements.The meeting highlighted on the following prospects:

- Local Challenge Fund (LCF) is a competitive research grant that supports cross-disciplinary research projects that address any of the 17 Sustainable Development Goals (SDGs) at district level. BUITEMS will be nominated for LCF as per discussion in meeting.
- Including other Competitive Research Grants: GCF, TTSF, NRPU and Research Support Grants: Travel Grants for Presentation of Research Papers, Grants for Organizing Seminars/ Conferences will be announced for BUITEMS.

DICE-IET 2020 at COMSATS Lahore Campus

COMSATS (CUI) Lahore Campus invited BUITEMS Quetta to participate in the DICE-IET Innovation event held on March 6-7, 2020 in collaboration with Distinguished, Innovation, Collaboration, and Entrepreneurship (DICE) Foundation, USA. BUITEMS exhibited 4 projects in this competition.

Research & Development

Research Projects

Department of Computer Engineering

S. No	Name of Students	Title	Supervisor
1	Rozi Muhammad M. Ismail Sanaullah Sunaira Javed	Controlling Wheelchair By Voice Recognition	Ms. Bushra
2	Ali Muhammad Waqas Asif Khudai Noor	Smart Solar System	Mr. Umair
3	M. Shahzaib Aimal Khan Zarshana Tareen Essa Khan	Obe-Based Education Grading System	Mr. Akram
4	Abdul Basit Imranullah Bawar Khan	Pharmaceutical Automation	Mr. Umair
5	Muhamad Anas Din Muhammad Amir Khan Usman Ayaz	Computerised Based Iot Heating And Cooling System	Dr. Jan Muhammad
6	Moiz Ahmad Umer Akbar Abdul Wahab Fida Hussain	Arduino Controlled Smart Hydroponic Modular System	Mr. Umair
7	Sohail Khan Tayyab Ali Faizan Ali Imrana Ayub	Medassist	Mr. Akram
8	Ajmal Shah Asif Bazai Maqsood Shah Yasir Ali	Energy Harvesting From Human Walk	Mr. Junaid
9	Sarosh Ansar Sahar Shareef Abbas Khan Waqas Haider	Smart Patrolling Robot	Mr. Akram

Department of Information Technology

S. No	Name of Students	Title	Supervisor
1	Baneen Zahra Sunny Kalra Asma Batool	Competitive Social Network	Dr. Mumraiz Kasi / Sikander Khan
2	Adila Jaffar	Dahleez	Dr. Faisal Ahmed Khan / Arbab Sufyan Kasi
3	Faheem Ur Rehman	Android Application For Real-Time Monitoring And Control Of Agricultural Drip Irrigation System	Engr. Syed Owais Athar / Mr Junaid Hassan
4	Saqib Nadeem Hafiza Khola Abida Wazir Ramsha	Event Aasani	Ayesha Iftikhar
5	Sheharyar Madiha Sheeza Ishtiaq	Sportify	M. Arsalan Idris / Sikander Khan
6	Hamdullah Abdul Baqi S. Masood Ur Rehman S. Imran	An Efficient Smart Home System	Dr. Raja Asif Wagan
7	M. Arsalan Changaiz Khan Khalid M. Aslam	Intelligent Menu System	Dr. Raja Asif Wagan
8	Irfan Ali Jassra Naeem Ayesha Ghazanfar Maria Akhtar	AazMAYESHGAH	Zubair Zaland / Sikander Khan
9	M. Rehan Ali M. Amir M.Aslam	Organ Donation System	Dr. Raja Asif Wagan
10	Mutahir H. Mubeen U. Laila M. Mobeen	SAMAN	Zubair Zaland
11	Hakeem Saad	FYP Management System	Mr. Junaid Hassan
12	Farhan Azam Noman Ahmed Khan	Intra-City Transport Management System	Mr. Asad Ali
13	Roshaan Abdullah	BUITEMS E-Bridge APP	Dr. Raja Asif Wagan

Department of Geological Engineering

S. No	Name of Students	Title	Supervisor
1	Muhammad Ahmed Mujtaba Sachal Rasool Haidran Khan Aziz Ullah Israr Ul Haq	Variation of Engineering Properties of Soil in Different Locations of Quetta City	Siraj Hussain
2	Zafer Injam Tariq Nazir Zameer Ud Din Balach Baloch Faiz Ullah Younus Khan	Classification of Selected Soil Sample using (AASHTO) and (USCS)	Imad Ali
3	Muhammad Salman Waqas Ahmed Khalid Saif Ul Islam Mirwise Khan Syed Wasy Muhammad	Visual Interpretation of Soil Properties of BUITEMS using Geographic Information System ARC GIS.	Asif Abbas

Department of Petroleum & Gas Engineering

S. No	Name of Students	Title	Supervisor
1	Aqrabullah, Muhammad Faheem, Shoukat Ali, Waqar Younis, Muzzamil Khan, Zaheer Abbas	PVT Properties Measurement And Prediction Using PVT Apparatus And Computer Modelling Group (CMG)	Dr. Nasir Khan / Engr. Syed Jamal ud Din
2	Muhammad Faisal, Asfandyar, Samiullah, Atiqueullah, Shamsher, Kashif Ali, Nizam ud din	Case study: reservoir modelling of north sea (troll oil field) by petrel and volumetric method	Engr. Nauman Zobby
3	Amanullah, Jehangir malik, Syed jahangir shah, Syed kumail ameer, Hamayun Khan, Inamullah	Elimination of liquid loading in gas wells	Engr. Nauman Zobby
4	Jahangir Khan, Sarfraz Rahmdil Talha, Sohrab Shoukat, Amir khan, Hamayun Aziz, Asghar malik	Identification and Viable solution to high water cut in Multilayer fractured Reservoir.	Engr. Najeeb ullah khan

S. No	Name of Students	Title	Supervisor
5	Mahmood Alam, Muhammad Assad, Sohaib Aziz, Eidden, Shams Ud din, Abdul Malik, Rahimullah	The implication of Top-down modelling in the oil and gas industry	Engr. Usama Ahmed Khand
6	Sami Ullah, Fareed, Assad Ur Rehman, Saif Haneef, Atta Ur Rehman, Adnan Umer	Shale Gas Production Optimization Using Reservoir Simulator	Engr. Usama Ahmed Khand
7	Jan Muhammad, Muhammad Ashraf, Hikmatullah, Waqar Ahmed, Khan Wazir, Balach Bashir	Case study of optimization of Water alternating Gas injection insand stone Reservoirs	Engr. Zafarullah Abro

Department of Mining Engineering

S. No	Name of Students	Title	Supervisor
1	Sana ullah Gul, Abdul Salam, Mir Shamshair Mengal	Correlation of Uniaxial Compressive strength and Point load index for the Marble of District Khuzdar	Engr. Sajid Khan
2	Sameed Islam, Noor Ahmed	To study Underground Mine Environment in PMDC Sor-range Collieries for Risk Assessment of Mine Explosions	Prof. Dr. Khan Gul Jadoon
3	Azhar Hayat, Shabir Ahmed, Meeran ullah Khan	To study the Ventilation system of Sardar Usman (Lease No 40) and PMDC (Lease No 98), Sor-Range	Engr. Abbas Hussain
4	Asmat ullah, Faisal Akbar, Abdul Majeed Khan	Identification and Control of Coal Dust in PMDC Coal Mines	Engr. Sami Kakar
5	Syed Hafeez Ur Rahman, Shehzad Usman, Dilawar Khan	Determination of Durability and Strength of Sandstone and Shale of United Coal Company Sor-Range	Engr. Tufail Ahmed
6	Wajahat Ali, Muhammad Salim, Madeeh Lallah	Blending and Analysis of Mach and South African Coal for Cement Industry in Pakistan	Dr. Fahim AHmed
7	Ihsan Ullah, Masoom Khan, Tahir Khan	To study and Determine Pressure Losses in PMDC Sor-Range Coal Mine for Assessment of Ventilation	Engr. Abdullah Rasheed

Department of Sociology

S. No	Name of Students	Title	Supervisor
1	Bibi Rozina, Aliza Ashraf	Women Empowerment and Political Mobilization: A case study of Quetta	Dr.Bashir Ahmed
2	Siyala Achakzai, Imtiaz Ahmed, Dur e Farwa	Identifying the exigency of women as a tool in product Marketing	Mr.Habbat Kibzai
3	Sami Ullah, Shakeel Khan, Alamzaib	Afghan Refugees in Pakistan are between hopes and despair in putting up their future. A case study of Afghan Refugees in Balochistan	Dr.Bashir Ahmed
4	Wilayat Hussain, Ahmed Naseer	Sociological analysis of Gender discrimination at workplace in Quetta	Mohsin Khan
5	Azra Kasi, Mosavir Ali	Sociological analysis of youth attraction towards weapons in Balochistan	Dr. Bashir Ahmed
6	Ijaz Azeem	Causes and Consequences of Educational Inequality: A case study of Layari	Habbat Shah

Department of Biotechnology

S. No	Name of Students	Title	Supervisor
1	Hareem Fatima	Sequence and phylogenetic Analysis of Complete Mitochondrial Genome of Sahiwal Cattle	Mr. Naveed Iqbal
2	Humaira	Green Synthesis of Silver Nanoparticles using Methanolic extract of Berries of Juniper excels, Evaluation of their Characterization and antibacterial Activity	Dr. Nusrat Jahan Mr. Imran Ali Sani
3	Hafeez ur Rehman	Prevalence of Depression among students Of the Quetta city Across sectional study	Ms. Arooj Khan
4	Ayesha Khan	A Cross-Sectional survey to evaluate Knowledge and to practice regarding seasonal influenza of Buitems students	Mr. Akram Ali
5	Rumaisa Kamran	Identification of Different Plant Diseases Its culturing and DNA Extraction	Mr. Imran Ali Sani
6	Saira Raza	Identification of Diseases of Apple Its Culturing and DNA extraction of Penicillium expansum	Mr. Imran Ali Sani

S. No	Name of Students	Title	Supervisor
7	Neelam Jamil	Screening and Molecular Identification of cellulose Degrading Bacteria	Dr. Anwar Khan
8	Sami ur Rehman	Clinical Evaluation and Amplification of CLN8 Gene	Ms. Sara Naudhani
9	Zafar Ali	Pakistan cattle Genome Scan to Provide Baseline Data For Improved Indicine Genomic Marker Assisted Selection	Mr. Naveed Iqbal
10	Rehana	Amplification of Exon1 of BRD2 Gene In Epilepsy Patients of Balochistan	Ms. Muneeza Arbab
11	Jamil ur Rehman	Farmer's perception about climate change and its impact on Agriculture of Rural areas of Pishin	Ms. Ghazala M.Ali
12	Sadia Ali	Phenotypic Evaluation and Amplification of EXON 13 of GLI3 in Polydactyle	Ms. Ghazala M.Ali
13	Sania Jabeen	Identification of variants associated with Virgin Mammary Gland in Cattle	Mr. Naveed Iqbal
14	Farrukh Pir Zada	Identification of Mutations in HBB Gene from Thalassemia Patient	Dr. Shakeela Daud
15	Habiba Khalid	Mutational and Clinical Analysis of MYOC Gene in Myopic Individuals of Quetta	Dr. Asma Yousafzai
16	Murad Mehboob Ali	Synthesis of Silver Nanoparticles from Medicinal Plant Ephedra intermedia and evaluation of its Antifungal Activity	Dr. Nusrat Jahan Mr. Imran Ali Sani
17	Sania Abdul Razzaque	Isolation and Characterization of Antibiotic-resistant bacteria from Hospital Wastewater	Ms. Maliha Rehman
18	Hameeda Arbab	Antifungal Activity of Essential oils on Bread	Dr. Agha M.Raza
19	Naila Kakar	Identification of Candidate genomics variants associated with lactation mammary traits in Cattle	Mr. Naveed Iqbal
20	Kamal Khan	Demographic Distribution of Diabetic Patients from district Sibi, Pakistan	Dr. Haleema Sadia
21	Alashba Naudhani	Prevalence of Amenorrhea Among Undergraduate females at BUITEMS: A cross Sectional Study	Ms. Nida Tabassum
22	Hira Naseem	Genome-wide identification, evolutionary analysis and expression profiling of the RBOH Family Genes in Nicotinia sylvestris and Nicotiana Tomentosiformis	Dr. Kaleem Ullah

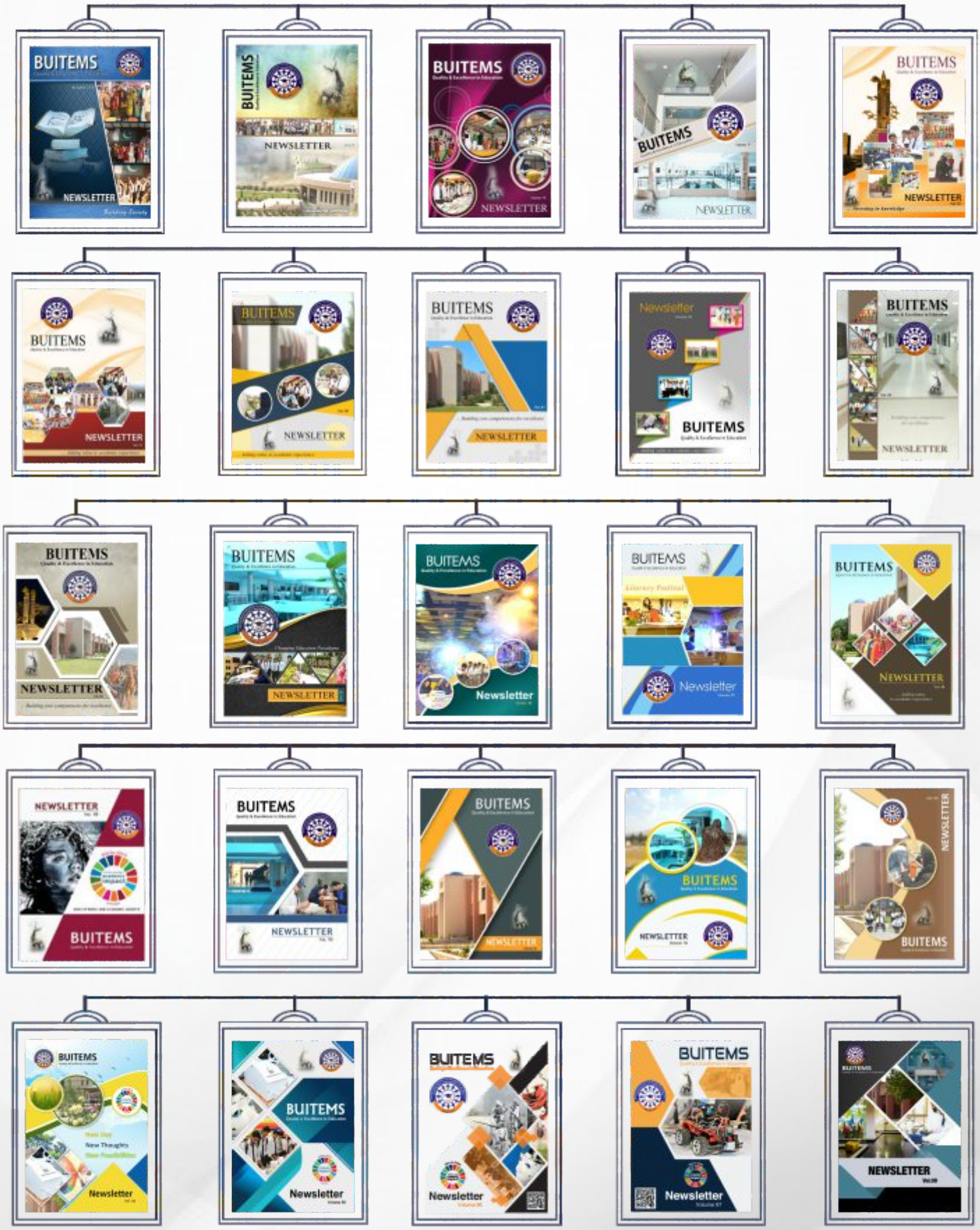
S. No	Name of Students	Title	Supervisor
23	Mehar Bano	Sequence Analysis of Gene GATA4 in Patients Of Ventricular Setal Defect	Mr. Nisar Ahmed Mr. Imran Ali Sani
24	Zara	Extraction and Antifungal Activity of Essential Oils Against Phytopathogenic Fungi	Mr.Akram Ali
25	Nausheen Hussain	Prevalence of Dylexia Among Undergraduate Students at BUITEMS	Ms. Nida Tabassum
26	Rehan Shabbir	Wheat Species Growing In Relation To Use Different Fertilizer To Check the Yield	Mr. Imran Ali Sani
27	Naveen Fatima	Confirmation of two significant Variations responsible for Atopic Dermatitis(AD)	Mr. Nisar Ahmed Mr. Imran Ali Sani

BUITEMS
Publications

It has been a tradition of BUITEMS to update the faculty, students and other stackholders on the activities, events and achievements of the University. The purpose is to accomplished by publishing quarterly Newsletters and Annual Reports.

Annual Reports

Newsletters

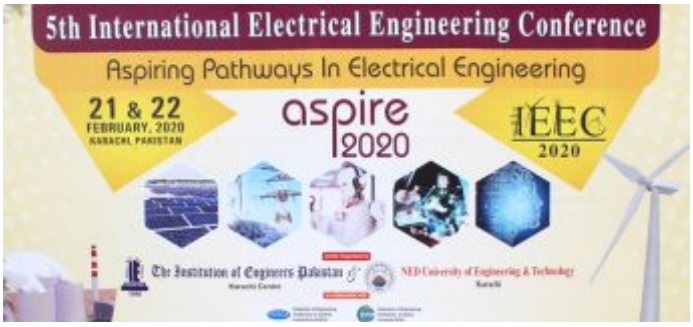


Conferences

5th International Electrical Engineering Conference, 2020

The 5th International Electrical Engineering Conference was held in Karachi on 21-22 February 2020. Organized by NED University of Engineering and Technology, and Institute of Engineers Pakistan, the two-day event featured researchers from all over the country. An extensive range of research work spanning numerous areas including electrical power systems and policies, renewable energy systems, artificial intelligence and robotics, image and signal processing, internet of things, and computer systems and networks was presented by the authors.

Muhammad Haris, Laboratory Engineer, Department of Electrical Engineering, FICT, attended the conference as an author and presented his research paper titled, "Heliostat Field Layout: An overview of the modern trends in Generation, Optimization and Control Strategies".



Climate Risks and Perspective of Children and Youth: Reflection on Provincial Conferences

Research and Development Foundation (RDF) organized the One Day National Conference on Climate Risks and Perspective of Children and Youth: Reflection on Provincial Conferences on December 21, 2020, in Islamabad. Since Miss Tanzeel Khan,student of MS and Research associate at Environmental sciences department of FOE&A BUITEMS moderated the provincial conference that was held in November in Quetta, she was invited to participate and to moderate the recommendations at the National conference in Islamabad too. Research and Development Foundation (RDF) presented a certificate of participation and admired her efforts. Students from 10 different Universities of Pakistan actively participated in this conference.

Seerat-Un-Nabi Conference: A Glimpse into the Family Life of Prophet Muhammad (SAW)

Seerat-Un-Nabi Conference with the title of a glimpse into the family life of Prophet Muhammad (SAW) was organized in BUITEMS on November 2, 2020, at Pink Hall by Directorate Student Affairs. The began with Naat Khuwani starting with Mr. Azam Chishti Bulbul E Balochistan, respected Shahzad Alam Chief Engineer Sui Southern Company Limited Quetta famous Naat Khawan respected Arshad Iqbal, Lecturer BUITEMS Sahar Faiz, Mufti Waheed Sawati, and alumni of BUITEMS Hasnain Abbas who enlightened the hearts of the audience with their unique and beautiful voice. Furthermore, a comprehensive speech on the “Life of Holy Prophet PBUH” was delivered by the famous Islamic Scholar Maulana Anwar Ul Haq Haqqani Sahib. He covered the whole and every aspect of the Holy Life of Prophet PBUH.

Workshop

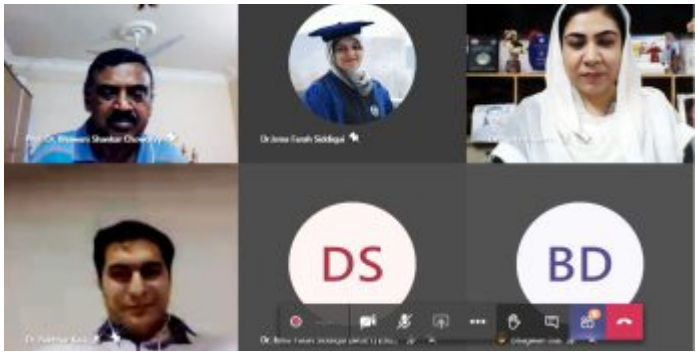
The CLDP - IP licensing workshop at IBA Karachi

A patent document is a technology-legal document that gives valuable insight into the technical, legal and commercial aspects of patented technologies. The Higher Education Commission (HEC) Pakistan organized a two days' workshop on, "Commercial Law Development Program - Intellectual Property Licensing" at the Institute of Business Administration, Karachi on March 3-4, 2020 with the technical support of the United States Department of Commerce and Commercial Law Development Program (CLDP). The workshop enhanced the understanding of the focal persons and officials of BUITEMS, Quetta and other southern Higher Education Institutions (HEIs) on Intellectual Property (IP) Licensing.

The main objectives of the workshop were:

- Usefulness and promotion of patent information and World Intellectual Property Organization WIPO's Project on the Establishment of Technology and Innovation Support Centers (TISCs)
- Intellectual property licensing procedure by using the Commercial Law Development Program
- Building Innovation on Patent Information: Research and Patent Filing Experience in Pakistan
- Search Tools and Strategies, including use of the International Patent Classification (IPC)
- Reading and Understanding Patent Documents

Two Days CPD Program "Artificial Intelligence"



The Directorate of Human Resource Development in collaboration with the Faculty of Information & Technology, BUITEMS organized two days professional growth workshop on "Artificial Intelligence" under Continuing Professional Development program (CPD) for Professional Engineers (PE), including BUITEMS Registered Engineers (RE) and Final semester students FOE and FICT on November, 24-25, 2020 at BUITEMS Takatu Campus, Quetta. This workshop intended to focus on the significance of artificial intelligence of machine learning, acknowledgement, and hands-on practice on deep learning using neural networks with different examples and modules. The training session began with the recitation from the Holy Quran and the HRD team welcomed all the participants and resource person Dr Muhammad Imran, Assistant Professor, FICT. The session focused on machine learning, artificial intelligence, and its applications. Furthermore, it the laid knowledge on the importance of neural networks, their implication, Google colab, python, terminologies, and models were introduced.

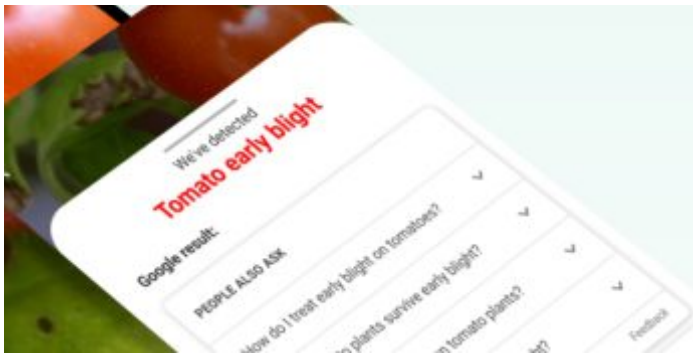
Achievements

IEEE Quetta Subsection Inauguration Ceremony

The Inauguration Ceremony of the IEEE Quetta Subsection was organized with great enthusiasm and splendour on the auspicious occasion of the 38th Anniversary of the IEEE Karachi Section. The event was held on July 14, 2020, virtually using Microsoft Teams. It was a lively event moderated by Dr. Mumraiz Kasi (Secretary, IEEE Quetta Subsection) and Dr. Bushra Naeem (Vice-Chair, IEEE Quetta Subsection).

The Ceremony was attended by several international and national renowned educationists and professionals, with 80 other attendees. The session started by playing the gracious and encouraging Video messages of Mr. Toshio Fukada (2020 IEEE President & CEO), Akinori Nishihara (2019-20 IEEE Region 10 Director) and Mr. Deepak Mathur (2019-20 IEEE Region 10 Director-Elect). After this, a Welcome address was delivered by Dr. Faisal Ahmad Khan who is the new Chair of IEEE Quetta Subsection as well as Pro-Vice-Chancellor of BUITEMS Quetta. This was followed by several Keynote speeches on different topics including 'Emerging Technologies – 50 trillion-dollar opportunity' by Mr. Hasan Syed (Founder & CEO of Bir Ventures), 'Technology in Balochistan and the Potential Role of Govt-Academia Collaboration' by Mr. Farrukh Attique (Additional Secretary and Chief Minister Delivery Unit of e-governance based public service delivery portal by the Government of Balochistan) and 'Karachi Section Anniversary' by Dr. Bhawani Shankar (Chair of IEEE Karachi Section and Professor Emeritus and former Dean at MUET, Jamshoro). Several interesting and engaging Presentations were also delivered on 'Balochistan Culture and Traditions' by Mr. Muhammad Bilal (Lecturer Department of Computer Science, FICT BUITEMS, Quetta), 'Quetta Subsection – from Student Branch to Subsection & Way Forward' by Dr. Bakhtiar Kasi (Dean Faculty of ICT, Former Branch counsellor IEEE SB BUITEMS) and also on Past, Present, and Future of IEEE Activities in IEEE Karachi Section and working towards IEEE Pakistan Council by Dr. Shahab Siddiqui (Membership Development Chair and New Initiatives Coordinator - IEEE Karachi Section).

Android Developers Challenge top 10 winners



Google officially announced its Android Developers (ADC) challenge top 10 winners on June 22, 2020. Among the top 10 winners; 4 teams were from the USA, 3 from India, one from Germany, Africa and Pakistan each. Google's (ADC) Android Developers Challenge is an annual global competition where they shortlist 10 android apps for a theme that was to bring innovation with Machine Learning apps. The name of the winners remains on the android developer's page for 3 years. Team BUITEMS created an app “AgriFarm” that helps farmers detect plant diseases and prevent major damage to fruits and vegetables. The app's idea was floated by Dr. Mumraiz Kasi, Associate Professor. The Team particularly expressed gratitude to Dr. Faisal Khan, Pro-Vice-Chancellor and Vice-Chancellor under whose leadership the students were able to bring laurels to their alma mater.

BUITEMS Pension Section

In July 2018, a two members' team Mr. Shams-ul-Huda, Deputy Director Accounts, and Ms. Faiza Qazi, Assistant Director Finance of BUITEMS Finance department, embarked upon working on Pension of BUITEMS Family. In July 2018, a two members' team Mr. Shams-ul-Huda, Deputy Director Accounts, and Ms. Faiza Qazi, Assistant Director Finance of

BUITEMS Finance department, embarked upon working on Pension of BUITEMS Family. Pension Section has not only been completed, but the record of employees has also been documented. The first Pension Case of the BUITEMS family surfaced due to the unfortunate demise of Mr. Sajjad Ahmed (Ex-Driver) in a tragic incident in March 2019. The first payment of family pension was released on May 20, 2020.

BUITEMS Library Inauguration Ceremony

BUITEMS Library is the backbone of the institution as it is a great source of information through 50,000 available books, CDs, DVDs, students project reports and HEC digital library sources, national and international newspapers, periodicals, generals magazines, BUITEMS newsletters, HEC newsletters, e-books, internet, Wi-Fi and online searching. On August 25, 2020, the Honorable Governor Balochistan Mr. Amanullah khan Yasinzai inaugurated the new library building at Takatu Camps. On this occasion, the worthy Vice Chancellor, Ahmed Farooq Bazi, Pro Vice Chancellor, Dr. Faisal Ahmad Khan, BUITEMS Senate members, Registrar, Deans, Directors and respected Faculty members were also present.

The Establishment of University College of Zhob First Sub-Campus of BUITEMS

The University College of Zhob is a sub-campus of Balochistan University of Information Technology, Engineering and Management Sciences, (BUITEMS). The establishment of the University College of Zhob, BUITEMS was a project of the Government of Pakistan in the Public Sector Development Program 2016-2017. The principal objective of this project is the provision of quality education to the students of Zhob and the region. This objective will be achieved in two stages, first_The provision of necessary facilitates at a temporary building to initiate classes. In the second stage, provision of infrastructure and allied facilitates at the permanent campus. In the first stage, necessary facilities to initiate classes have been provided and classes were started from 10th of April 2018. The existing interim setup of the University College is located at Sambaza Road Appozai, Zhob. In the interim setup at present BS, programs are being offed in the departments of Management Sciences, Economics, Education, and Computer Sciences.

The permanent building of the University College of Zhob in planned to be built on 180 acres at Kili Hassanzai Shin Ghar Road, Zhob. The land is donated by Malik Khalid Hassan Khan Mandokhail. The foundation laying ceremony of the permanent building of the University College of Zhob, BUITEMS, was laid by Governor Balochistan and Chancellor BUITEMS, Justice (R) Aman Ullah Khan Yasinzai on 13th October 2020. His Excellency Mr. Ahmed Farooq Bazai, Vice Chancellor BUITEMS, Deans, Directors and Registrar BUITEMS, local administration, political leaders and tribal heads of Zhob graced the occasion with their presence. Currently, the construction work is in progress on a master plan at a faster pace. The project completion time for the first phase is 24 months and in the first phase along with the boundary wall, academic block, administration block, medical centre, library, cafeteria, boys' hostel, girls' hostel, faculty lodges, gym, internal roads and playground will be built.

Foundation Laying Ceremony of University College of Zhob, BUITEMS

For the promotion of modern learning, Balochistan University of Information Technology, Engineering, and Management Sciences (BUITEMS) was established in 2002. The establishment of the University College of Zhob, a sub-campus of BUITEMS is a step towards the achievement of this broader objective. The inaugural ceremony of the University College of Zhob, BUITEMS, was held on October 13, 2020. Governor Balochistan and Chancellor BUITEMS, Justice (R) Aman Ullah Khan Yasinzai was the chief guest accompanied by the Vice-Chancellor, Pro-vice Chancellor, Registrar, Deans, and Directors of BUITEMS.

Prof Dr. Abdul Salam Lodhi, Director University College of Zhob, BUITEMS cordially greeted the notable Chief Guest including other distinguished guests, political leaders, local administration, and prominent tribal elders. His Excellency Mr. Ahmed Farooq Bazai, Vice-Chancellor BUITEMS thanked Governor Balochistan for the continuous and generous support regarding education in Balochistan. Dignifying the founding event as a Chief Guest, the worthy Governor Balochistan assured complete and unconditional support for elevating the standard of education and research in Balochistan.

Ground Breaking Ceremony of DEWATS site at BUITEMS

Mr. Saboor Kakar, Secretary Environment Government of Balochistan, visited the Decentralised Waste Water Treatment System (DEWATS) site at BUITEMS on September 3, 2020, and inaugurated the DEWATS site work. Pro.VC Dr. Faisal Ahmed Khan and Director ORIC, Dr. Muhammad Naeem Shahwani welcomed the guests as ORIC-BUITEMS hosted the event at the Takatu campus. The event was arranged by Balochistan Rural Support Programme (BRSP) while members from Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) also participated in the ceremony.

BUITEMS Students shine bright in Huawei Seeds for the Future Program-2020, Pakistan

Huawei Pakistan together with the Higher Education Commission (HEC) of Pakistan, launched the “Seeds for the Future program 2020”, a 5-day long culture and ICT learning program wherein 32 brilliant engineering students were shortlisted from different universities of Pakistan and Kenya. The program was first launched in Pakistan in 2015. This year's event of Huawei Seeds for the Future Program was the 5th program; 32 students were nominated by HEC out of a total of 1173 applicants comprising of students of undergraduate engineering degree programs. During the one-week online learning program from September 21 to 25, 2020, students from Kenya alongside students from Pakistan received technical training from Huawei and industry ICT experts, who shared their expertise on courses covering a wide range of topics like the Chinese Language, Strategic Leadership, 5G, Cloud Computing, AI etc. Muhammad Shahzeb Khan, student of BS Computer Engineering from BUITEMS, Quetta attained top 2nd position with perfect scores and secured a sponsored trip to China in 2021. Rana Ashar Mehmood and Muhammad Rafi Faisal from Electronics Engineering, 6th Semester secured top positions.The online closing ceremony was attended by Moin-ul-Haque, Pakistan Ambassador to China, Dr Fateh Marri, Executive Director HEC, Ma Libing, Deputy CEO, Huawei Pakistan.

STAR AWARD

Balochistan Star Awards ceremony for the year 2020 was held on December 22, 2020, in collaboration with the Government of Balochistan. The awards were distributed among artists from different fields: drama, theatre,

film making, music and visual Arts, This award was Exclusive to senior Artists of Balochistan, who tried their best to promote the art and culture of Balochistan. Provincial Minister of Culture, Mr. Sadat Hussain was the Chief Guest and the event was attended by people from all walks of life. Mr, Kaleem Khan, Director, Fine Arts, BUITEMS was awarded the “STAR AWARD”.

Quaid's Day

Youth Parliamentarian Award on the eve of youth Parliamentarian day was announced by the youth wing on Quaid- e-Azam day. The respected Chief Guests of the occasion was Minister of State Parliamentary Affairs, Mr. Ali Mohammad Khan and Deputy Speaker National Assembly, Mr. Qasim Khan Suri was invited and the audience included a large number of parliamentarians, lawyers, university professors and people from all walks of life. It was an honour for BUITEMS that Mr. Kaleem Khan, Director Fine Arts, BUITEMS was awarded Quaid's Day Award.

Directorates

Office of Research Innovation & Commercialization (ORIC)

Research and development form the core of life at the Balochistan University of Information Technology, Engineering & Management Sciences (BUITEMS). As an institution of higher learning, BUITEMS is increasingly focusing its efforts and energy on R&D. To this end, research groups at BUITEMS are continuously busy solving problems about the province, the nation and the world.

Another factor that sets BUITEMS apart from other research universities is the harmonious, highly collaborative environment among the faculty that fuels the university. The challenging research goals at BUITEMS are continuously accomplished through funding from BUITEMS and with the support of national and international agencies who share a passion for great ideas, courageous thinking and a desire to shape the future to come. With the courage and passion of the people at BUITEMS and with the help of friends, BUITEMS will achieve its greatest aspirations to become the technological research University. To manage the enthusiastic and comprehensive research objectives, BUITEMS has established a central Office of Research, Innovation, and Commercialization (ORIC). ORIC has become a pivotal entity to promote research in the university and is assisting researchers within the university to think the unthinkable research solutions and seek national and international funding for their endeavours. Through ORIC, BUITEMS is also encouraging its researchers by providing them incentives to publish quality research work in the most reputable research journals worldwide. We believe that every problem faced by the community has solutions that can be discovered only if we, as a society, resort to academic intellectuals and invest in their endeavours.

Research Projects

No one can deny the effect of funding on the trends of the research. Money always talks. The funding agencies have their interests and agendas to direct the research and manipulate the result on some occasions. Having said that, the mindful, honest researcher will show the truth as it is and will not twist the results to suit the funders. It is like, journalism; the truth should be said as it is without any distortions or deviations. The ethics codes in research are highly followed in the developed countries to prevent this from happening, and to make sure that all involved in the research are protected from any coercion, harm, pressure and breach of privacy.

BUITEMS faculty is trying its best to secure funds from international, national funding agencies for conducting research to address the burning issues of society and generate new knowledge for developing province, country and region. . Furthermore, BUITEMS administration with its limited financial resources also allocating a significant amount to fund small research projects through ORIC and undergraduate/ graduate level research through respective faculties for creating the research culture at BUITEMS.

Brief details of research projects won/ executed during 2019-20 by faculty members from international, national funding agencies along with their resources is given below with a brief description and expected outcome of each project:

PROJECTS FUNDED BY INTERNATIONAL SPONSORING AGENCIES

1. Project TITLE: Decentralized Waste Water Treatment System (DEWATS).

Principal Investigator: Prof. Dr. M. Naeem Shahwani, Director ORIC BUITEMS.

Funding Agency/ Institution: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) Gmbh Germany

Brief Description: GIZ Sanitation for Millions programme is responsible for the design of appropriate decentralized wastewater treatment systems at BUITEMS, for supervising the construction work, and for capacity building on operation and maintenance for personnel overseeing the operations of the plants. Furthermore, BORDA provides lectures

and workshops at BUITEMS with students and selected lecturers of the faculty. BORDA and BRSP support GIZ in planning, constructing and operating a low-cost wastewater treatment system. BRSP in cooperation with GIZ and BUITEMS gives guidance to local service providers and construction firms. BRSP conducts the tenders to identify appropriate construction firms.

Expected Impact: Under this project, a complete wastewater treatment plant with a capacity of 65 cubic meters will be constructed and a model plant. Along with the construction of this plant the international funding agency will arrange capacity building training for faculty members and the subject matter will be included in the curriculum of four departments.

2. Project TITLE: Connecting the unconnected internet for underserved rural schools

Principal Investigator: Syed Tariq Shah, Assistant Professor, Faculty of Information and Communication Technology (FICT)

Funding Agency/ Institution: TEINS Corporation South Korea

Brief Description: The project entitled "Connecting the Unconnected: Internet for Underserved and Remote Rural School" granted under the third call for proposal of Asi@connect which is the sub-granted project of Trans-Eurasia Information Network (TEIN *CC) funded by the European Union. Connecting the Unconnected is a capacity-building project that aims to bridge the digital divide between the educational communities. The project is focused on the high-level objective of connecting the unconnected underserved communities and promoting educational networking in underdeveloped Balochistan.

Schools" is a joint venture of TEIN*CC, BUITEMS, and Education Department (Government of Balochistan). The project focuses on providing quality education in remote areas of Balochistan. More specifically, to overcome the problems of weak infrastructure, communication gaps, and limited resources, a state-of-the-art distance facility will be deployed in selected remote schools. Furthermore, to mitigate the problem of lack of on-ground skilled teachers, capacity building and training sessions (i.e. Train-the-Trainer's program) will be conducted along with the development of a distance learning program. The Train-the-Trainers initiative will help in sustaining this project in the long run by providing necessary training to the teachers of the selected schools to own and operate these facilities in the best possible way. Likewise, in the distance learning program, a subject expert will deliver interactive online lectures (based on board curriculum) to the students in remote schools. Moreover, this project also aims to provide similar facilities in the schools located in Afghan Refugee Camps and settlements in Balochistan. This initiative will not only provide them with quality education but will also develop a sense of inclusion and psychological healing of refugees displaced due to war. Besides, extracurricular activities like science competitions, essay writing competitions, speech competitions, and many other activities on such lines, that are unheard of in most Refugee Camps and remote schools shall be introduced along with other modern learning practices. To increase awareness of the importance of education and ensure visibility of our activities we will make a strong online presence which is an integral part of this project. The overall goal is to provide quality education using state-of-the-art technologies in the remote and underserved areas of Balochistan.

Expected Impact: Under this project, a complete survey-based database of schools working in remote rural areas will be developed which will help monitoring agencies to keep a check on the quality of education.

3. Project TITLE: Monitoring, Assessment, Evaluation, Research & Development of World Food Programme interventions in different Vulnerable Areas of Balochistan

Principal Office to Execute: University Advancement and Financial Assistance (UAFA)

Funding Agency: United Nations World Food Programme

Brief Description: WFP Approved five years country strategic plan (CSP) (2018-2022) that follows government priorities and seek synergies with partners to support Pakistan in achieving Vision 2025, the Sustainable Development Goals and other key plans and policies, including the provision of technical assistance to meet its commitments in the line with international norms and standards. WFP will accelerate the shift commenced in the previous PRRO towards advancing the Government of Pakistan's priorities by focusing on strengthening institutional means for tackling malnutrition; gender-related disparities issues, disaster risk reduction, resilience and encouraging public-private partnerships for sustainable development while retaining WFP's humanitarian, development and emergency response capacities. The main objective of this partnership is to engage BUITEMS staff, faculty and recent graduates from various departments in the monitoring and assessment of WFP activities are being undertaken in these areas. As a complement of the WFP monitoring and evaluation system, this partnership will guarantee

full outreach to all areas. When an outsource services provided in place in the form of government educational institutions. Which is not involved in WFP activates. The partnership will contribute to the capacity development initiatives of institutions by WFP so that these could facilitate implementation and monitoring of such interventions in government that model in the long term. It will also provide an opportunity for BUITEMS to involve faculty members, staff and graduates in the development work in their communities and also provide their theoretical knowledge to practical application.

Expected Impact: Under this project, survey teams from BUITEMS will collect data on food availability and its quality from all from few selected districts of Balochistan and submit a comprehensive report to the World Food Program about the efficiency of their interventions.

RESEARCH PROJECTS FUNDED BY NATIONAL SPONSORING AGENCIES

1. Project TITLE: Development of IR camouflage shelters utilizing Baluchi: Wool based composites

Principal Investigator: Dr. Syed Zameer ul- Hassan, Associate Professor, Department of Textile Engineering, Faculty of Engineering & Architecture

Funding Agency: Higher Education Commission of Pakistan

Brief Description: The proposed concept mainly deals with the utilization of local raw materials to fabricate high-end value-added products, which can not only reduce the import burden on the economy but also create employment for the locals particularly for the breeders. The project has the following expected outcomes & aims:

1. Development of optimized processing of local wool for value-added products fabrication.

2. Fabrication of wool-based non-woven sheet of processed wool.

3. Developing bonding of non-woven sheet using needle punching.

4. Utilization of local raw wool for value addition and the uplift of the economy of the farmers.

Development of IR camouflage shelters utilizing Baluchi wool-based composites

Expected Impact: The proposed project aims to produce Balochi wool-based composite sheets for Infrared shielding for light-weight shielding shelters utilizing natural environment friendly locally available raw material. The suggested product can replace the existing IR shielding technologies like coating, metallic sheets and incorporation of other novel materials into the base material to achieve the required shielding level which also multiplies the cost factor of the end product. Wool is abundantly available in Pakistan particularly in the Balochistan region in which, 40% economy depends on livestock and wool contributes only 1.5% to it but unfortunately all the wool ends up as waste with no production of a value-added product.

In this work, we propose to use wool fibres that are intrinsically IR resistant having good strength and low environmental factor. The wool fibres when mixed with matrix-like resins and reinforcing agent can be converted into a rigid sheet-like structure which can be utilized to make shelter directly or as insulation layers on an already existed structure. This methodology can provide a low cost and lightweight IR shielding material which can be directly beneficial for defence purposes where IR shielding is required to camouflage to hide personals or valuable commodities. Furthermore, the utilization of local raw material can provide opportunities to local industries and breeder of Pakistan in general and Balochistan in particular.

1. Project TITLE: Preparation and Characterization of di, tri and block co-polymers epoxy-based thin PDLC

Principal Investigator: Dr.Mujtaba Elahi, Assistant Professor, Department of Chemistry, Faculty of Arts and Basic Sciences (FABS).

Funding Agency: Higher Education Commission of Pakistan

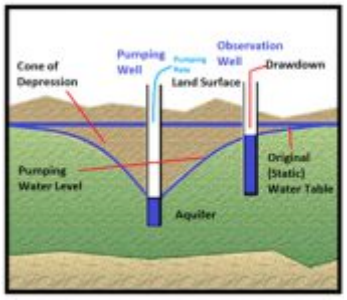
Brief Description: Smart glass or Polymer-dispersed liquid crystals (PDLCs) represent an important class of materials with several unique electro-optical (E-O) applications such as intimacy windows, digital signage, different light modulators, complex billboards, fibre optical devices and public display due to high transmittance and high light shading as well as high mechanical stability.The presented project under the supervision of Dr. Mujtaba Ellahi was a tri-pack joint project of, BUITEMS, HEC, and Industry with a grant of 13.654 Million PKR. In this project, the partner Industry was International Polymer Industries, Islamabad. This project was supported by Higher Education Commission Pakistan (HEC), under its Technology Development Fund (TDF-02-054) 2nd call 2017-2018 titled as, and “Study on the effects of silver nanoparticles (AgNPs) in epoxy monomers based PDLC films (Smart glass).

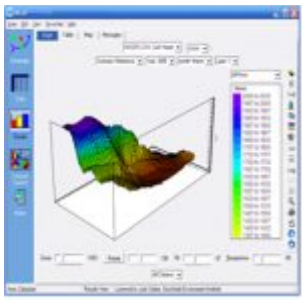
3. Project TITLE: Evaluation of the groundwater system and explore the recharge zone of depleting aquifer at Quetta valley

Principal Investigator: Dr. Malik Muhammad Akhtar Assistant Professor, Department of Environmental Sciences, Faculty of Life Sciences & Informatics.

Funding Agency: Higher Education Commission of Pakistan

Brief Description: Groundwater and surface water systems are significant of the hydrologic cycle, while both exist in different domain but inter-dependent. Human beings depend on groundwater for drinking and other domestic use due to better quality as compared to other surface water sources. Due to human activities, natural resources are under stress, lack proper planning and management. Groundwater modelling has great significance to understand what is happening below the earth. By using this modelling technique, researchers can estimate water resources, inflow and outflow, such information are very useful for sustainable planning. This project has great significance for limited water resources regions such as Quetta Valley. On completion of the project, we will be able to understand real hydrogeological issues, explore new recharge points for aquifer feeding and frame policy for sustainable resources utilization and regional development.





4. Project TITLE: DNA based floral biodiversity inventories of Quetta, Zhob, Musa Khail and Harnai Districts of Balochistan.

Principal Investigator: Prof. Dr. Nazeer Ahmed, Department of Biotechnology, Faculty of Life Sciences & Informatics.

Funding Agency: Higher Education Commission of Pakistan

Brief Description: Biodiversity science, for more than two centuries, is focusing on developing an inventory of species. The conventional strategies have been able to decipher only a fraction of this enormous diversity of life in the last 250 years. Keeping in view the time and cost required to undertaking a giant task of discovery and documentation of all forms of life on earth, an affordable and rapid alternative is the need of the hour.

DNA barcoding, as a complementary biodiversity discipline to taxonomy, fits best to fill this gap. DNA barcoding uses short stretches of the genetic material to serve as diagnostic features for a species. Utilizing rbcl and Matk (standard plant DNA barcodes), we plan a biodiversity census of the flora of Quetta, Zhob, Musakhel and Harnai districts of Balochistan province.

The PCR amplified products of these two loci will be sequenced bi-directionally. Approximately 800-1000 plant species of the mentioned districts are expected to be barcoded. These barcodes will also be used for performing evolutionary studies/ phylogenetic analysis. The molecular data will be submitted to GenBank and the "Barcode of Life Data Systems (BOLD)" The sequence data will serve as a platform for future scientific investigation on the documented plant species globally particularly for biodiversity conservation studies of the target areas.

5. Project TITLE: Design synthesis and physicochemical characterization of selected naphthoquinones quinolones and isoquinolines based drugs in the presence of surfactants as membrane models.

Principal Investigator: Dr. Manoon ur Rasheed, Assistant Professor, Department of Chemistry, Faculty of Arts and Basic Sciences (FABS).

Funding Agency: Higher Education Commission of Pakistan

Goal and Objectives

1. To design and synthesize new potent isoquinolines, quinolines and naphthoquinones based anti-tumour, anti-inflammatory and anti-parasitic agents

2. To explore the nature and energetics of the binding interactions and the mechanism by which simple micelle systems (neutral, ionic and zwitterion) solubilize the selected compounds.

3. To understand the interactions of selected compounds with DNA and its mode of action in inducing cell apoptosis, necrosis and inhibition of phagocytosis.

4. To get good publications and patents from this work and establish a market-oriented research group in future.

6. Project TITLE: Project Title: Establishment of the National centre of GIS and Space application (NCGSA)

Principal Investigator: Dr. Bakhtiyar Khan Kasi (Associate Professor Department of Software Engineering) Dean Faculty of Information and Communication Technology.

Funding Agency: Higher Education Commission of Pakistan

Goal and Objectives

1. The system will interoperability by allowing to display of different spatial data format such as GML, KML, GPX on maps supporting a variety of spatial data sources.

2. The system shall allow integration of various spatial data format and display on maps.

3. Our proposed system shall be able to get data from other sources such as Wi-Fi-scan camera surveillances etc...

4. It should be an open-source solution to reduce cost.

5. The system should support the ability to import open geodetic data sets.

Brief Description: BUITEMS from Balochistan achieved and granted the amount of Rs. 69.586 Million to establish of National Center of GIS and space applications (NCGSA). The System will support interoperability by allowing displaying of spatial data format GML, KML, GPX on map. GIS-based mapping of minerals in Balochistan with the use of remote security techniques for minerals extraction, evaluation and formal quantification of naturally accurate materials of Balochistan.

Research Projects Funded By ORIC BUITEMS Quetta

Faculty of Life Sciences and Informatics Technology

1. Principal Investigator: Dr. Haleem Sadia, Assistant Professor, Department of Biotechnology

Title of Research Project: Expression studies of Colon Cancer Associated Transcript

2. Principal Investigator: Prof. Dr. Muhammad Naeem Shahwani, Department of Biotechnology

Title of Research Project: Identification of Salt Stress Responsive Micro RNAs and their Expression profiling in Sorghum bicolour.

3. Principal Investigator: Dr. Shahjahan Shabbir Ahmed, Department of Biotechnology

Title of Research Project: Identification of reference genes suitable for qRT -PCR in Olive (Olea europaea L) Balochistan.

4. Principal Investigator: Dr. Javid Hussain Assistant Professor, Department of Environmental Sciences

Title of Research Project: Characterization and mobility of major and trace element in groundwater of Quetta City, Pakistan.

5. Principal Investigator: Dr Nusrat Jahan, Department of Biotechnology

Title of Research Project: Formation of green Silver nanoparticles and evaluation of their biological tests using Medicinal Plants and their secondary metabolites of Balochistan.

6. Principal Investigator: Dr. Samia Perveen Assistant Professor, Department of Microbiology

Title of Research Project: Characterization of bacterial control agents against phytopathogenic fungi from Balochistan Province.

7. Principal Investigator: Dr. Faiz Muhammad, Assistant Professor, Department of Microbiology

Title of Research Project: Isolation and characterization of Macro-bacterium aviums subsp. paratuberculosis from cattle farms around Quetta city.

8. Principal Investigator: Dr. Rozeena Shaikh, Assistant Professor, Department of Biotechnology

Title of Research Project: Identification of CYPI9AI gene polymorphism in females affected with polycystic ovary syndrome (Pcos) in Quetta Balochistan.

9. Principal Investigator: Prof. Dr. Mohammad Saeed, Department of Biotechnology

Title of Research Project: Impact of warming on the regeneration of two forest tree species in Balochistan

Faculty of Arts and Basic Sciences

1. Principal Investigator: Dr. Hamid Ullah, Assistant Professor, Department of Chemistry

Title of Research Project: Studies on the synthesis of Morita Baylis Hillman (MBH) adducts' derivatives.

2. Principal Investigator: Dr. Muhammad Khalid, Assistant Professor, Department of Physics

Title of Research Project: Effect of rare earth metal ion substitution in Barium Hexa-Ferrite nanoparticles for high storage and microwave device applications

3. Principal Investigator: Dr. Gulfam Nasar, Assistant Professor, Department of Chemistry.

Title of Research Project: A study on synthesis and characterization of polymer-ferrite nano composites.

Faculty of Management Sciences

1. Principal Investigator: Mr. Aziz Ahmad, Lecturer, Department of Economics

Title of Research Project: Human Resource Planning for Special Economic Zones and Export Processing Zones (SEZs/EPZs) of Baluchistan.

2. Principal Investigator: Dr. Tariq Ahmed Department of Economics

Title of Research Project: Understanding the role and performance of new generation business incubation centres.

Faculty of Information and Communication

1. Principal Investigator: Dr. Faizullah Khan Assistant Professor Department of Telecom Engineering

Title of Research Project: Performance Evaluation of FSO using different Modulation Schemes on Various Atmospheric Effects.

2. Principal Investigator: Dr. Bakhtiar Khan Kasi, Dean FICT

Title of Research Project: Remote Healthcare Diagnostics System.

3. Principal Investigator: Dr. Jameel Ahmed Khan Assistant Professor, Department of Electronic Engineering

Title of Research Project: Image Contrast Enhancement Technique for Improvement in Recognition Performance.

4. Principal Investigator: Dr. Mumraiz Khan Kasi, Associate Professor, Department of Computer Sciences

Title of Research Project: Investigating the effectiveness of different communication technologies in a hazardous workplace.

5. Principal Investigator: Muhammad Arif Assistant Professor, Department of Electronic Engineering

Title of Research Project: Non-Orthogonal Multiple Access Based SWIPT Cognitive relay Network.

6. Principal Investigator: Dr. Muhammad Ashraf, Assistant Professor Department of Computer Engineering

Title of Research Project: On-Spot Identification System for Non.-Custom Paid, and Stolen Vehicles.

7. Principal Investigator: Dr. Surat Khan, Department of Electronic Engineering

Title of Research Project: Performance Analysis of Different Single Sign On (SSO) Scheme Network Traffic in Hardware Based Environment.

8. Principal Investigator: Dr. Abdul Ali Khan Assistant Professor, Department of Telecom Engineering

Title of Research Project: IoT Board Air Pollution Monitoring System.

Faculty of Engineering and Architecture

1. Principal Investigator: Dr. Faisal Mushtaq Associate Professor, Department of Chemical Engineering

Title of Research Project: Utilization of indigenous Materials for Sound Proof Applications

2. Principal Investigator: Dr. Muhmmad Saqib Siddiqui, Assistant Professor, Department of Chemical Textile Engineering

Title of Research Project: Fabrication of Textile based Piezoelectric Nanogenerators using ferroelectric Coatings

3. Principal Investigator: Dr. Syed Kamran Sami, Associate Professor, Department of Chemical Engineering

Title of Research Project: Numerical Model of Nanotech based Optical Filters and Smart Sensors for Robotics and Home Automation Applications.

4. Principal Investigator: Dr. Syed Zameer Ul Hassan, Associate Professor, Department of Textile Engineering

Title of Research Project: Fabrication & Characterization of MM Capacitor Using Multilayer High-K Dielectric for Analog/Mixed RF Devices.

5. Principal Investigator: Muhammad Najam Khan, Associate Professor, Department of Chemical Engineering

Title of Research Project: Semiconductor Metal Oxide base sensors for safety applications.

6. Principal Investigator: Dr. Abdul Malik Rehan Abbasi, Associate Professor, Department of Textile Engineering

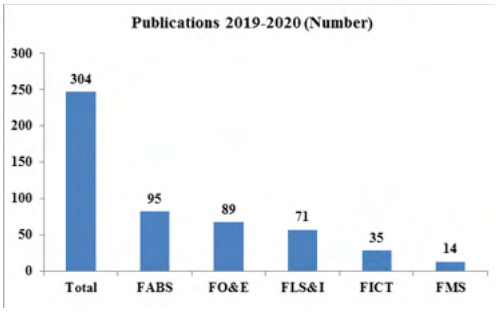
Title of Research Project: Development of Novel and value-added building materials using textile composites and Nan- filers

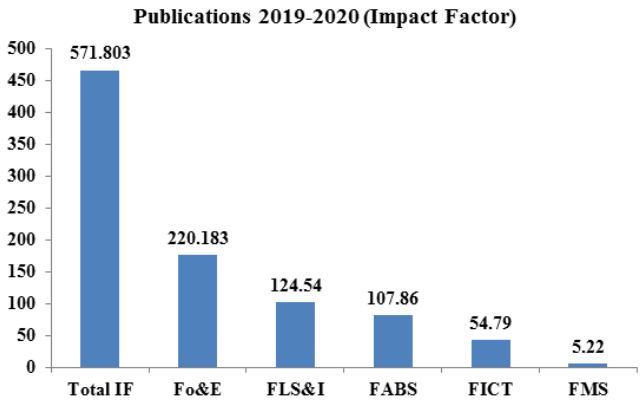
Research Publications

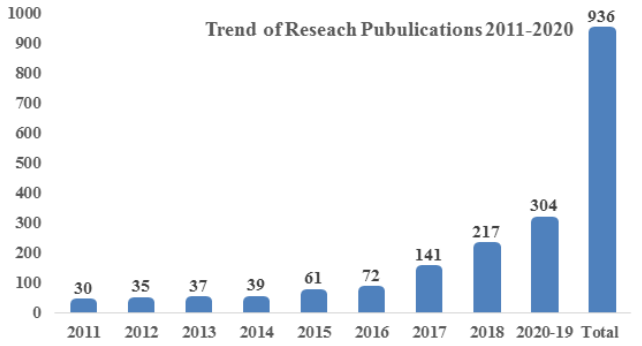
Benefits of Publishing a Research Paper

There is great relevance to research in education. Apart from ensuring in-depth knowledge over a topic, scientific and historical research papers also contribute to the world of knowledge. These journals or papers become the helping hands for the students in the future guiding and helping them in research. Students need to understand the role of scientific research in society and the importance of scientific research in education as it will ultimately reward them in return.

BUITEMS RESEARCH PUBLICATION LIST 2019-20







Complete Details of Research Publications Published by Five Faculties of BUITEMS

Faculty Of Life Sciences And Informatics

1. Baez-Ortega A, Gori K, Strakova A, Allen JL, Allum KM, Bansse-Issa L, Bhutia TN, Bisson JL, Briceño C, Domracheva AC, **Sadia H**, et al. (2019). Somatic evolution and global expansion of an ancient transmissible cancer lineage. Science. 365 (6452): eaau9923. **(IF: 41.03).**

2. Ullah I, **Kakar N**, Schrauwen I, Hussain S, Chakchouk I, Liaqat K, Acharya A, Wasif N, Santos-Cortez RLP, Khan S. (2019). Variants in KIAA0825 underlie autosomal recessive postaxial polydactyly. Human Genetics. 138 (6):593-600. **(IF: 5.2).**

3. Irshad A, Sarwar N, **Sadia H**, Malik K, Javed I, Irshad A, Afzal M, Abbas M, Rizvi H. (2019). Comprehensive facts on dynamic antimicrobial properties of polysaccharides and biomolecules-silver nanoparticle conjugate. International Journal of Biological Macromolecules. **(IF: 4.78).**

4. Ijaz A, Wolf S, Mandukhail SR, Basit S, Betz RC, **Wali A.** (2019). UV-sensitive syndrome: Whole

exome sequencing identified a nonsense mutation in the gene UVSSA in two consanguineous pedigrees from Pakistan. Journal of dermatological science. 95 (3):113-118. **(IF: 3.98).**

5. Irshad A, Sarwar N, **Sadia H**, Riaz M, Sharif S, Shahid M, Khan JA. (2019). Silver nanoparticles: synthesis and characterization by using glucans extracted from Pleurotus ostreatus. Applied Nanoscience. 1-10. **(IF: 3.19).**

6. Yu S, **Kakar KU**, Yang Z, Nawaz Z, Lin S, Guo Y, Ren X-l, Baloch AA, Han D. (2019). Systematic study of the stress-responsive Rboh gene family in Nicotiana tabacum: Genome-wide identification, evolution and role in disease resistance. Genomics. **(IF: 3.1).**

7. Fahim R, Lu X, Jilani G, **Hussain J**, Hussain I. (2019). Comparison of floating-bed wetland and gravel filter amended with limestone and sawdust for sewage treatment. Environmental Science and Pollution Research. 26(20):20400-20410. **(IF: 2.91).**

8. Khan SZ, Ajmal N, **Shaikh R.** (2019). Diabetic Retinopathy and Vascular Endothelial Growth Factor Gene Insertion/Deletion Polymorphism.Canadian Journal of Diabetes. https://doi.org/10.1016/j.jcjd. 2019.08.005. **(IF: 2.88).**

9. Karim S, Malik IR, Nazeer Q, Zaheer A, Farooq M, Mahmood N, Malik A, **Asif M**, Mehmood A, Khan AR. (2019). Molecular analysis of V617F mutation in Janus kinase 2 gene of breast cancer patients. Saudi Journal of Biological Sciences. 26 (6):1123-1128. **(IF: 2.82).**

10. Malik A, Butt TT, Ashraf MAB, Rasool R, Zahid A, Waquar S, **Asif M**, Zaheer A, Jabbar A. (2019). Implications of advanced oxidation protein products (AOPPs), advanced glycation end products (AGEs) and other biomarkers in the development of cardiovascular diseases. Saudi Journal of Biological Sciences. 26 (2):334-339. **(IF: 2.82).**

11. Iqbal N, Liu X, Yang T, Huang Z, Hanif Q, Asif M, Khan QM, Mansoor S. (2019). Genomic variants identified from whole-genome resequencing of indicine cattle breeds from Pakistan. PloS one 14 (4):e0215065. **(IF: 2.77).**

12. Lima Cunha D, Alakloby OM, Gruber R, **Kakar N**, Ahmad J, Alawbathani S, Plank R, Eckl K, Krabichler B, Altmüller J. (2019). Unknown mutations and genotype/phenotype correlations of autosomal recessive congenital ichthyosis in patients from Saudi Arabia and Pakistan. Molecular genetics & genomic medicine. 7(3):e539. **(IF: 2.43).**

13. Ghori SA, Gul S, Tahir S, Sohail M, Batool S, **Shahwani MN**, Bano G. (2019). Wood-derived biochar influences nutrient use efficiency of heavy metals in spinach (spinacia oleracea) under groundwater and wastewater irrigation. Journal of Environmental Engineering and Landscape Management. 27(3):144-152. **(IF: 2.23).**

14. Bhinder MA, **Sadia H,** Mahmood N, Qasim M, Hussain Z, Rashid MM, Zahoor MY, Bhatti R, Shehzad W, Waryah AM. (2019). Consanguinity: A blessing or menace at population level? Annals of human genetics. 214-219. **(IF: 2.1).**

15. Ajmal N, Khan SZ, **Shaikh R.** (2019.) Polycystic ovary syndrome (PCOS) and genetic predisposition: A review article. European journal of obstetrics & gynecology and reproductive biology: X: 100060. **(IF: 2.02).**

16. Hassan N, Anesio AM, **Rafiq M**, Holtvoeth J, Bull I, Williamson CJ, Hasan F (2019) Cell membrane fatty acid and pigment composition of the psychrotolerant cyanobacterium Nodularia spumigena CHS1 isolated from Hopar glacier, Pakistan. Extremophiles. **(IF: 2.04).**

17. Din G, Hassan A, **Rafiq M**, Hasan F, Badshah M, Khan S, Chen G, Ripp S, Shah AA (2019) Characterization of Organic Acid Producing Aspergillus tubingensis FMS1 and its Role in Metals Leaching from Soil. Geomicrobiology Journal:1-9. **(IF: 1.6).**

18. Ali, E, Hussain A, Ullah I, **KaKar KU** et al. (2019) Cadmium phytotoxicity: issues, progresses, environmental concerns and future perspectives. Revista De La Facultad De Ciencias Agrarias. 1-15. **(IF: 1.58).**

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21. Ijaz A, Basit S, Gul A, Batool L, Hussain A, Afzal S, Ramzan K, Ahmad J, **Wali A.** (2019) XPC gene mutations in families with xeroderma pigmentosum from Pakistan; prevalent founder effect. Congenital anomalies 59 (1):18-21. **(IF: 1.23).**

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25. Aslam U, bassum B, Aaliya K, Tariq M, Nasir I, Hassan S, Ismail T, Ali N, Ponya Z, **Khan A.** (2019). The effectiveness of recombinant chitinase obtained from barley (hordeum vulgare l.) Against potato pathogens. Applied ecology and environmental research .17 (2):4147-4157. **(IF: 0.67).**

26. Mushtaq A, Rizwan S, Jamil N, Ishtiaq T, Irfan S, Ismail T, Malghani MN, **Shahwani MN.** (2019). Influence of Silicon Sources & Controlled Release Fertilizer on the Growth of Wheat Cultivars of Balochistan under Salt Stress. Pakistan Journal of Botany. 51(5):1561-1567. **(IF: 0.67).**

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29. Zeeshan M, Khan SZ, Ajmal N, Shehzad P, Shah SA, Khan MA, Daud S, **Shaikh R.** (2019). DMD Gene Mutation identification in Duchenne Muscular Dystrophy Patients of Quetta, Balochistan, Pakistan. BioCell. 43(5):361-371. **(IF: 0.63).**

30. Gul R, Jan SU, Ahmed M, Faridullah S, Akhtar M (2019) Extraction, formulation and characterization of an in vitro and ex-vivo evaluation of Thymus serpyllum L.(Thymus oil) from topical preparations using dialysis cellulose membrane and natural rabbit skin. Pakistan journal of pharmaceutical sciences 32 (4).1563-1570. **(IF: 0.59).**

31. Manzoor S, Saif R, **Sadia H**, Firyal S, Tayyab M, Mansha M, Mahmood A, Hashmi A, Awan A, Wasim M. (2019). Molecular expression of cyclin dependent kinase inhibitor (p21) in canine tumors. Journal of Animal and Plant Sciences. 29(4):1127-1134. **(IF: 0.56).**

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34. Gul R, Jan SU, Khan A2, Qureshi MM, **Jahan N.** (2019) Formulation and Evaluation of Topical Carbamazepine Semi Solid Dosage Forms for Transdermal Drug Delivery. Lat Am J Pharm 38 (1): 121-127 **(IF: 0.29).**

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36. Buzdar S, Mushtaq A, Rizwan S, Jabeen U, Bashir F, Safdar F, Baloch M, Khan M, Razaq MA, Shahwani N (2019). Impact of halopriming on four wheat (Triticum aestivum l.) Cultivars of Balochistan under saline conditions. Bangladesh Journal of Botany 48 (4):1091-1097. **(IF: 0.21).**

37. Rehman WU, Rehman GU, Jan FU, Rehman HU, Roshan S, Shams S, Khan K, Raza S, **Sadia S**, Ahmed R, Khanam N, **Shahwani MN**, **et al.** (2019). Exploring and Identification of Fish Fauna of River Jindi at District Charsadda, KPK, Pakistan. International Journal of Biosciences. 15:355-362 **(ISI Indexed).**

38. Malik A, Saleem S, Ansari SA, Iqbal J, **Asif M**, Kamal MA, Al-Qahtani MH, Karim S. (2019). Assessment of circulating biochemical markers in mice receiving cinnamon and glycyrrhizin under carbon tetrachloride induced hepatic injury. Proceedings of the National Academy of Sciences, India Section B: Biological Sciences. 89 (1):105-111. **(ISI Indexed).**

39. Wadood AA, **Sadia H**, Yangqing L, Hussain T, Safdar M, Shahzad Q, Ashiq K, Ali A, Ashiq S. (2019). Identification of variations in the coding region of myostatin (MSTN) gene of thalli and Pak-Karakul sheep breed in Pakistan. Journal of Microbiology, Biotechnology and Food Sciences 2019:335-337. **(ISI Indexed).**

40. Ashiq S, Ashiq K, Shabana S, Shahid SU, Qayyum M, Sadia H. (2019). Prevalence And Role Of Different Risk Factors With Emphasis on Genetics in Development of Pathophysiology of Coronary Artery Disease (CAD). Pakistan Heart Journal 52 (4). **(ISI Indexed).**

41. Sadia H, Batool R, Mansoor R, Qureshi B, Ashiq S, Irshad A, Riaz M, Ashiq K. (2019). Investigation of liver function tests (LFTs) and renal function tests (RFTs) in pregnant women affected with hypertensive disorders of pregnancy (HDP). International Journal of Biosciences. 14:86-94. **(ISI Indexed).**

42. Malik K, Hussain M, Sadaqat R, Ahmad H, Basit MH, Azam S, Qamar H, Nazir A, **Sadia H**, et al. (2019). Molecular medicines for neutralization of Clostridium botulinum neurotoxin. International Journal of Biosciences. 14:78-90. **(ISI Indexed).**

43. Batool T, Mahmood Z, Riaz M, Dogar MZUH, Irshad S, Murtaza MA, Mehmood K, Rasool G, Irshad A, **Sadia H.** (2019). Comparative study of nutritional status, minerals and heavy metal contents in tetra pack branded milk samples with fresh milk from selected milk producing animals. International Journal of Biosciences. 15:161-167. **(ISI Indexed).**

44. Khan F, Ayaz M, Arshad A, Fouzia, Rehman HU, Ali A, Ashiq S, Ashiq K, **Sadia H**, et al. (2019). Microcephaly in General Population of Districts Karak and Bannu Khyber Pakhtunkhwa (KP), Pakistan. Biological Forum. 11:284-289. **(ISI Indexed).**

45. Ullah I, Ullah H, Rehman HU, Khan F, Ashiq S, Ashiq K, Sadia H. (2019). Preoperative Anxiety Level among Patients Undergoing Elective General Surgery in District Head Quarter Hospital (DHQ) Timergara. Biological Forum.11:271-279. **(ISI Indexed).**

46. Gul N, Rehman AU, Rehman HU, Noor H, Khan NA, Mahmood N, Matiullah, Ashiq S, Ashiq K, **Sadia H**, Raza S, Mehmood H, Khan M, Aziz A, Malik K. (2019). Prevalence of Gingivitis in Tehsil Takht Bhai District MardanKPK Pakistan. International Journal of BioSciences.15:447-452. **(ISI Indexed).**

47. Malik K, Razzaq A, Ghufran H, Naseer MA, Tariq Y, Abbas Z, Basit MH, Nazir A, Saeed A, Bhatti R, Shahid M, Fatima A, **Sadia H.** (2019). Urgency of novel anti-tuberculosis strategies: a prospective challenge. International Journal of Biosciences. 15(2): 281-296. **(ISI Indexed).**

48. Ali L, Shujaat N, Gilani SM, Rehman HU, Khan F, Noor H, Khan NA, Ayaz U, Ghani U, **Sadia H.** (2019). Foam Mat Drying of Banana (Musa acuminate) Pulp. Biological Forum. 11(1): 273-276. **(ISI Indexed).**

49. Ghilzai MY, Arshad GH, **Imran AS**, Nisar A, Mohammad A, Zafarullah, Azhar S, Essa K, Zia, Umair A & Sajid N. (2019). Food Preferences of Quetta Boer, Aeolesthes sarta Coleoptera; (Cerambycidae) under Contro Condition. Indo American J. Pharmaceutical Sciences. 06:10; 12712-12727. **(ISI Indexed).**

50. Ara T, Asmatullah K, Samiullah J, Asim I, Arsia S, **Imran AS**, Nisar A, Dawood S (2019). To Investigate the Prevalence & Distribution of Predatory Insect, Hierodula patellifera a Prominent Species of Praying mantis (Insecta: Mantodea) in Quetta and Pishin Districts of Balochistan, Pakistan. Indo American J. Pharmaceutical Sciences. 06 :(02); 3591-3598. **(ISI Indexed).**

51. Aziz S, Imran AS, Yujie L, **Shahjahan SA**, Nazeer A, Nisar A, Dawood S & Sajid N (2019). Biological Control of Insect Pests using Trichogramma minutum as Biological Control Agent against Thrips on Roses. Indo American Journal of Pharmaceutical Sciences. 06: (10), 12728-12734. **(ISI Indexed).**

52. Javed Z, Farooq HM, Ullah M, Zaheer M, Iqbal QR, **Sadia H**, Pezzani R, Salehi B, Sharifi-Rad J, Cho WC (2019) Wnt signaling: A potential therapeutic target in head and neck squamous cell carcinoma. Asian Pacific Journal of Cancer Prevention 20 (4): 995-1003. **(ISI Indexed).**

53. Rehman WU, Hussain A, Yar A, Khan K,

Rehman HU, Khanam N, Akhter K, Raza S, **Sadia H**, et al. (2019).Water quality parameters of River Jindi at District Charsadda, KPK, Pakistan. International Journal of Biosciences. 15(2):363-369. **(ISI Indexed).**

54. Liaqat F, Naeem W, Shafee M, Anwar M, **Sadia H**, Ghilzai D, Akbar A. (2019). Virulence factors and drug resistance in Klebsiella pneumoniae; an emerging superbug. Pure and Applied Biology. 8 (2):1314-1337. **(HEC Recognized in Y Category).**

55. Sarwar N, Ahmed R, Saadullah M , Khan KU , Kamran S , Baig FA , Mansoor MK, Aqib AI, Prince K, Saleem MZ, Manzoor AW, **Sadia H.** (2019). Prevalence of Helicobacter pylori infection and its associated diseases in low socio-economic workers in tertiary care hospital of Lahore, Pakistan. Biomedical letters. 5(1):1-6. **(HEC Recognized in Z recognized).**

56. Nawaz M, Mengal N, Mureed S, **Raza AM**, Saeed M, Ahmed J. (2019). A missense mutation of msx1 gene in Pakistani families with hypodontia. Pakistan Armed Forces Medical Journal 69 (3):571-576. **(HEC Recognized in Y Category).**

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58. Sajjad W, Zheng G, Ma X, Xu W, Ali B, **Rafiq M**, Zada S, Irfan M, Zeman J (2020) Dissolution of Cu and Zn-bearing ore by indigenous iron-oxidizing bacterial consortia supplemented with dried bamboo sawdust and variations in bacterial structural dynamics: A new concept in bioleaching. Science of The Total Environment 709:136136. **(IF:5.58).**

59. Din G, Hassan A, **Rafiq M**, Hasan F, Badshah M, Khan S, Chen G, Ripp S, Shah AA (2020) Characterization of Organic Acid Producing Aspergillus tubingensis FMS1 and its Role in Metals Leaching from Soil. Geomicrobiology Journal 37 (4): 336-344. **(IF:1.60).**

60. Bhatti MU, Riaz S, Toufiq N, Adeyinka OS, Khan A, Yousaf I, Tariq M, Murtaza S, Nasir IA, Tabassum B (2020) The potential and efficacy of Allium sativum leaf lectin (ASAL) against sap-sucking insect pests of transgenic maize. Biologia. 1-8. **(IF:0.72).**

61. Ali E, Hussain A, Ullah I, Khan FS, Kausar S, Rashid SA, Rabbani I, Imran M, **Kakar KU**, Shah JM (2020) Cadmium phytotoxicity: issues, progress, environmental concerns and future perspectives. Revista de la Facultad de Ciencias Agrarias UNCuyo 52 (1):391-405. **(IF: 3.60).**

62. Kakar KU, Nawaz Z, Cui Z, Ahemd N, Ren X (2020) Molecular breeding approaches for production of disease-resilient commercially important tobacco. Briefings in Functional Genomics 19 (1):10-25. **(IF: 3.13).**

63. Yu S, **Kakar KU**, Yang Z, Nawaz Z, Lin S, Guo Y, Ren X-l, Baloch AA, Han D (2020) Systematic study of the stress-responsive Rboh gene family in Nicotiana tabacum: Genome-wide identification, evolution and role in disease resistance. Genomics 112 (2):1404-1418. **(IF: 1.15).**

64. Ali J, Khan S, Khan A, Waqas M, Nasir MJ (2020) Contamination of soil with potentially toxic metals and their bioaccumulation in wheat and associated health risk. Environmental Monitoring and Assessment 192 (2):138. **(IF:1.90).**

65. Khan MS, Khan A, Adeyinka OS, Yousaf I, Riaz S, Bashir B, Tariq M, Tabassum B (2020) Molecular cloning and expression of recombinant Trichoderma harzianum chitinase in Pichia pastoris. Advancements in Life Sciences 7 (3):122-128. **(ISI Indexed).**

66. Hassan N, Anesio AM, **Rafiq M**, Holtvoeth J, Bull I, Williamson CJ, Hasan F (2020) Cell membrane fatty acid and pigment composition of the psychrotolerant cyanobacterium Nodularia spumigena CHS1 isolated from Hopar glacier, Pakistan. Extremophiles 24 (1):135-145. **(IF: 2.04)**

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68. Irshad A, Sarwar N, **Sadia H**, Malik K, Javed I, Irshad A, Afzal M, Abbas M, Rizvi H (2020) Comprehensive facts on dynamic antimicrobial properties of polysaccharides and biomolecules-silver nanoparticle conjugate. International Journal of Biological Macromolecules 145:189-196. **(IF: 4.78)**

69. Khan SZ, Ajmal N, **Shaikh R** (2020) Diabetic Retinopathy and Vascular Endothelial Growth Factor Gene Insertion/Deletion Polymorphism. Canadian Journal of Diabetes 44 (3):287-291. **(IF: 3.19)**

70. Mushtaq M, Kovalevska L, Darekar S, Abramsson A, Zetterberg H, Kashuba V, Klein G, Arsenian-Henriksson M, Kashuba E (2020) Cell

stemness is maintained upon concurrent expression of RB and the mitochondrial ribosomal protein S18-2. Proceedings of the National Academy of Sciences 117 (27):15673-15683. **(ISI Indexed)**

71. Yousaf M, Zahir S, Riaz M, Hussain SM, Shah K (2020) Statistical analysis of forecasting COVID-19 for upcoming month in Pakistan. Chaos, Solitons & Fractals:109926. **(IF: 3.06)**

Faculty Of Arts And Basic Sciences

72. Qaisrani MA, Fang J, Jin Y, Wan Z, Tu N, **Khalid M**, Rahman MU, Wei J. (2019). Thermal losses evaluation of an external rectangular receiver in a windy environment. Solar Energy. 184:281-291. **(IF: 8.24).**

73. Shakeel A, Mahmood H, Farooq U, **Ullah Z**, Yasin S, Iqbal T, Chassagne C, Moniruzzaman M. (2019). Rheology of pure ionic liquids and their complex fluids: A review. ACS Sustainable Chemistry & Engineering. 7 (16):13586-13626. **(IF: 6.97).**

74. Ullah Z, Man Z, Khan AS, Muhammad N, Mahmood H, Ghanem OB, Ahmad P, Shah M-UH, Raheel M. (2019). Extraction of valuable chemicals from sustainable rice husk waste using ultrasonic assisted ionic liquids technology. Journal of Cleaner Production. 220:620-629. **(IF: 6.39).**

75. Ullah Z, Man Z, Khan AS, Muhammad N, Mahmood H, Ghanem OB, Ahmad P, **Ur-Rashid M**, Raheel M. (2019). Extraction of valuable chemicals from sustainable rice husk waste using ultrasonic assisted ionic liquids technology. Journal of Cleaner Production. 220:620-629. **(IF: 6.39).**

76. Shi S, Li P, Sheng Z, Jiang D, Tan Y, Wang D, Wen S, **Asghar HMNHA.** (2019). Energy efficiency improvement in electron beam purification of silicon by using graphite lining. **Energy.** 185:102-110. **(IF: 5. 53).**

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81. Rehman J, Ali R, **Ahmad N**, Lv X, Guo C. (2019). Theoretical investigation of strain-engineered WSe2 monolayers as anode material for Li-ion batteries. Journal of Alloys and Compounds 804:370-375. **(IF: 4.17).**

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Research Collaborations

Detail of Collaborations Developed During 2019-20

National

1. TITLE: Academic and Research Collaboration in the field of Engineering and Technologies.

Agency/ Institution: NED University of Engineering and Technology Karachi, Pakistan

Collaborator: ORIC

Brief Description: The purpose of these MoUs is to promote mutual understanding and scholarly collaboration by supporting academic and research activities among faculty and students of the two institutions. Accordingly, the areas of cooperation will include, subject to mutual consent, joint research, publication and patenting of a product that may get produced as a result of joint/collaborative research. Besides, applying for funding against joint research proposals will be another area that eventually may contribute to fostering and development the cooperative relationship between the two universities.

Expected Impact: The following outcomes are expected:

1.Applying for funding for joint research

2.Publication jointly authored by the faculty of the two institutions;

3.Exchange of academic materials and other information;

4.Jointly patenting of the product produced as a result of joint research.

5.Leveraging research and network of subject matter experts.

6.Access to the state of the art labs of two universities for research purpose.

7.Develop opportunities for exchange of training, conferences, workshops and academic meetings

2. TITLE: STEM hackathon for female programmers

The Asia Foundation

Agency/ Institution: The Asia Foundation, Islamabad

Collaborator: Dr. Bushra Naeem, Chairperson Computer Science Department, (Information & Communication Technology) BUITEMS

Brief Description: The purpose of this MoU is to enable the Foundation to coordinate with BUITEMS, Quetta to solidify commitments to encourage and empower female students of STEM, a field considered to be non-traditional for women in Pakistan. The project will implement a 48-hour intensive STEM hackathon for female programmers between the ages of 18 and 35 in Karachi (NED University), Hyderabad (The Shaheed Zulfikar Ali Bhutto Institute of Science and Technology - SZABIST) and Quetta (BUITEMS) and connect participants to the National Incubation Center in Quetta and Quetta to further develop and implement their ideas to engage more girls in STEM-related fields, connect with mentors and identify solutions to challenges faced by women in the field.

Expected Impact: After signing this Memorandum of Understanding (MoU), the Foundation in coordination with BUITEMS will carry out an introductory session with the university's female students to orient them

about the upcoming hackathon. The joint team of the Foundation and BUITEMS will assess the applications and select the top 15 female programmers at BUITEMS Quetta. After the promotion, on a mutually agreed date, the 48-hour hackathon will take place at the three selected universities simultaneously. Following the completion of the hackathon, the showcasing event will commence identifying the top two projects across the three target cities. Going forward, the Foundation will complete the transfer of the grant to the winning project, and link participants with the National Incubation Centers in Quetta to kick start the development of their projects.

3. TITLE: Technology and Knowledge Sharing.

Agency/ Institution: Pakistan Telecommunication Company Limited (PTCL)

Collaborator: ORIC

Brief Description: In the spirit of friendship and with a mutual interest in cooperation, PTCL and BUITEMS, Quetta enter into this Memorandum of Understanding (MoU) to promote training facilities with BUITEMS and can be helpful in terms of developing courses relating to Technology function (Communication) which includes Wireless(3G,4G) / Wireline / Fiber / Submarine / Exchanges / MSAG / MSAN & GPON.

Expected Impact: Both parties can benefit from this MoU in providing facilitations. PTCL shall offer expert opinion on the latest developing communication studies, 06 week long internship program for students, trainings for students and faculty at the Training Centre and halls of either side, to conduct workshop/Sessions. PTCL can offer its technical premises like Regional Telecom training colleges and schools exchanges, business operation and others for practical learning and research work for BUITEMS scholars.

4. TITLE: Donation of Retired Information Technology Equipment and Offering Internships to BUITEMS

Agency/ Institution: Sui Southern Gas Company Limited

Collaborator: ORIC

Brief Description: As per Corporate Social Responsibility (CSR) of SSGCL, the retired Information Technology (IT) equipment including heavy servers, systems, laptops and other related IT products will be provided to BUITEMS. The final year research projects of graduating students and prototypes which are related to the Gas Industry shall be commercialized, in collaboration with SSGCL, e.g; gas leakage detection and remotely indicate and access of Gas devices before any mishaps.

Expected Impact: SSGCL will hire graduates as internees with handsome pay from BUITEMS after completion of studies for two years minimum to achieve the goals set by the company and after successful completion of the internship, the graduates of BUITEMS may be able to be inducted into the company according to the HR policy by SSGCL. SSGCL shall support the research work by BUITEMS students in terms of research grants that stresses on Gas Industry which shall also be given an incentive.

5. TITLE: Collaboration in the field of Environment Sciences

Agency/ Institution: Islamic Relief, Pakistan

Collaborator: Dr. Malik Muhammad Akhtar, Chairman Environmental Sciences Department (LIFE SCIENCE) BUITEMS.

Brief Description: To explore potential mutually beneficial, applied and community-based research projects. To develop appropriate communication linkages to facilitate information transfer. Organize conference(s) and seminar(s) that facilitate either party for sharing and dissemination of their research work and achievements. To explore the feasibility of activities such as research, training, lectures, research reviews, seminars.

Expected Impact: Organize conference(s) and seminar(s) that facilitate either party for sharing and dissemination of their research work and achievements. To explore the feasibility of activities such as research, training, lectures, research reviews, seminars.

6. TITLE: Collaboration in the fields of Physics and allied disciplines

Agency/ Institution: National Centre for Physics, Islamabad

Collaborator: Collaboration in the fields of Physics and allied disciplines

Brief Description: The purpose of this MoU is to provide a framework for BUITEMS and NCP to

cooperate and coordinate with each other on the terms and conditions hereinafter set forth. A formal Linkage between BUITEMS and NCP is considered vital to boost research and technical cooperation in the areas of Physics and allied disciplines, to advance the state of science and technology in general and Physics in particular within the country and to bring benefit to both sides by sharing resources wherever possible.

Expected Impact: The parties shall provide training of scientific and technical personnel for teaching, research and development in the field of Physics and allied disciplines. Arranging Co-operated scientific research and technological development programmes. Supervision of research students in selected areas of mutual interest. Holding joint conferences, seminars, symposia, workshops and invited lectures at national and international level. Facilitation of enhanced utilization of NCP Grid/ Cluster facilities for BUITEMS researchers. Exchange of archives, publications and information. Arrangements for provision of easy access to researchers for entrance in the premises of NCP and BUITEMS for collaborative research activities/visits and use of each other's research and teaching facilities after necessary security clearance.

7. TITLE: Human Resource Development of BUITEMS Faculty through (On-Campus Seminar)

Agency/ Institution: NBEAC-HEC

Collaborator: Directorate of Human Resource Development (HRD), BUITEMS.

Brief Description: The objective of this MOU is to express the willingness of both parties to engage to promote: “Developmental Program” for business schools and faculty members. These programs are targeted at specific areas within the business schools that require attention/guidance for institutional and faculty development.

Expected Impact: The main aim is to operate the program as an NBEAC Seminar and provide overall program leadership, direction, and coordination of the non-academic portion of the seminar. This program shall cover oversee program evaluation review and coordinate any necessary program adjustments with the On-campus consultant. Select participants based upon the academic and professional qualifications; Plan, develop and launch a marketing campaign using printed material, flyers, advertisements and social media in consultation with the “Host Institution;” and Market the “Host Institution” name and the “Development Program” on website and newsletter as per the NBEAC policy.

8. TITLE: Pakistan's First Foresight Lab

Agency/ Institution: AGHAI

Collaborator: University Advancement and Financial Assistance (UAFA) BUITEMS.

Brief Description: The main purpose is to set Pakistan's First Foresight Lab. This will bring together experts with people from different disciplinary and academic backgrounds to roadmap their expert opinion and adapt existing models and methods to combine techniques to envision a broader range of insights.

Expected Impact: In collaboration with BUITEMS, AGHAI will work together to improve policy implementation and address different challenges and future perspectives.

International

1. TITLE: Title: Sanitation for Millions Programme (S4M)

Agency/ Institution: Deutsche Gesellschaft für internationale Zusammenarbeit (GIZ) Gmbh Germany

Collaborator: Prof. Dr. M. Naeem Shahwani, Director ORIC BUITEMS.

Brief Description: GIZ Sanitation for Millions programme is responsible for the design of appropriate decentralized wastewater treatment systems at BUITEMS, for supervising the construction work, and for capacity building on operation and maintenance for personnel overseeing the operations of the plants. Furthermore, BORDA provides lectures and workshops at BUITEMS with students and selected lecturers of the faculty. BORDA and BRSP support GIZ in planning, constructing and operating a low-cost wastewater treatment system. BRSP in cooperation with GIZ and BUITEMS gives guidance to local service providers and construction firms. BRSP conducts the tenders to identify appropriate construction firms.

Expected Impact: Under this project, a complete wastewater treatment plant with a capacity of 65 cubic meters will be constructed and a model plant. Along with the construction of this plant the international funding agency will arrange capacity building training for faculty members and the subject matter will be included in the curriculum of four departments.

2. TITLE: Project of voluntarily training

Agency/ Institution: American Board for Certification Of Teacher Excellence (ABCTE), USA

Collaborator: Directorate of Human Resource Development (HRD), BUITEMS.

Brief Description: The terms and conditions for the effective and timely performance of the Project of voluntarily training and preparing government teachers by ABCTE for uplifting the standards of teaching and provide the necessary resources to produce high-quality teachers, to improve overall education standards and shall apply to the relationship between the parties.

Expected Impact: ABCTE in willingness to the BUITEMS for voluntarily offering its online teacher training & certification program free of cost for uplifting the standards of teaching quality and providing internationally recognized teacher training program.

3. TITLE: Monitoring and Assessment of WFP activities

Agency/ Institution: United Nations World Food Programme WFP

Collaborator: University Advancement and Financial Assistance (UAFA) BUITEMS.

Brief Description: The main objective of this partnership is to engage BUITEMS staff, faculty and recent graduates from various departments in the monitoring and assessment of WFP activities are being undertaken in these areas. As a compliment WFP monitoring and evaluation system, this partnership will guarantee full outreach to all areas.

Expected Impact: This partnership will contribute to the capacity development initiatives of institutions to facilitate implementation and monitoring of interventions in government that model in the long term. It will also provide an opportunity for BUITEMS to involve faculty members, staff and graduates in the development work in their communities and also provide theoretical knowledge to practical application.

4. TITLE: Cooperation and facilitation

Agency/ Institution: United Nations Development Programs

Focal Person from BUITEMS: Prof. Dr. M. Naeem Shahwani, Director ORIC BUITEMS.

Brief Description: The purpose of this MoU is to provide a framework of cooperation and facilitate collaboration between the parties, on a non-exclusive basis, in areas of common interest.

Expected Impact: Collaborate in enhancing civic education by engaging UN youth volunteers from the University.

5. TITLE: Exchange Programme

Agency/ Institution: MEVLANA EXCHANGE PROGRAMME PROTOCOL

Collaborator: Faculty of Engineering and Architecture (FOE&A) BUITEMS.

Brief Description: Being one of the institutions that agreed on student and academic staff Exchange, it undertakes to concur with the principles and conditions outlined in the Mevlana Exchange Programme and accomplish the exchange in compliance with activities and numbers of students/ academic staff and line with “Higher Education Law (No: 2547)”.

Expected Impact: Mevlana Exchange Programme is a programme that aims at the exchange students and academic staff between the Turkish higher education institutions and higher education institutions of other countries. Students may study abroad for one (minimum) or two (maximum) terms and academic staff may lecture abroad from one week (minimum) to three months (maximum). Accordingly, students and academic staff from any country may benefit from this programme being hosted by Turkish higher education institutions.

Activities and Events of ORIC

DEWATS at BUITEMS:

BUITEMS in the name of “Decentralized Waste Water Treatment System” is establishing a water treatment plant; an innovative project that adds another feather in the cap for BUITEMS. BUITEMS in collaboration with GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) as the funding agency, BORDA (Bremen Overseas Research and Development Association) as the technical team and BRSP (Balochistan Rural Support Programme) as a financial partner, is hosting DEWATS at Takatu campus. A meeting, under the supervision

Dr. Muhammad Naeem Shahwani, Director ORIC, regarding the initiation of the project was held in the premises of VC secretariat BUITEMS by members from BUITEMS, GIZ, BORDA and BRSP to discuss BUITEMS site plan and some technical issues to set up the DEWATS module.

Mr. Tobias Ulbrich (Regional Coordinator Engineering from BORDA Germany) was connected on Skype call who shared his ideas and also Mr. Abdul Qayoum (Senior Project Engineer from BORDA Afghanistan) who informed us about the DEWATS in Afghanistan and its advantages in detail. Mr. Qaher Agha (In-charge) from BRSP along with other members attended the meeting. Mr. Muhammad Jaffar (Technical Advisor GIZ, Sanitation for Millions) and Ms Rabia Baloch were the members of GIZ Pakistan in the meeting. The Technical Team members for DEWATS also participated in the meeting including Mr. Mamoon Ur Rasheed, Director P&P BUITEMS, Dr. Zafar Baloch Chairperson, Geological Engineering BUITEMS, Dr. Najam Malghani, Associate Professor BUITEMS and Dr. Muhammad Amin, Chemical Engineering BUITEMS.

BUITEMS Information & Communication Technology 5th Undergraduate Research Colloquium

The 5th Undergrad Research Colloquium was conducted at the Arifa Kareem Randhawa Expo Center BUITEMS Quetta in July 2019. Honourable Governor Balochistan Retired Chief Justice Amanullah Yaseenzai was the chief guest of the event.

The event included a live demonstration of student-developed projects, poster exhibition, evaluation of the projects by judges, and award distribution ceremony. The event showcased 97 undergrad projects across all ICT disciplines. A wide range of student-developed products were presented on different themes such as Enterprise Software and Hardware Solutions, Home Automation, Robotics, Control Systems, Surveillance and Security, Telecommunication, Technology-Based Business and Educational Solutions, etc.

The event was attended by experts from the industry, academia, and the government. It aimed to provide an opportunity for linkages and technology transfer between academia, industry, and government.

Among people from the industry, colleagues from Technical Lead Jazz Karachi, Quetta-based Technical Leads of Ufone, ZTE, Wateen, and Telenor also participated. Colleagues from the PTCL were also there including their HR team. Moreover, colleagues from QUESCO, Pakistan Civil Aviation Authority, and various private firms also participated.

Among academic participants from other universities, was the chairperson, Computer Science Department University of Balochistan Dr. Ihsan Ullah along with his team, Dr. Usama Mir from Saudi Electronic University Saudi Arabia, faculty members from Alhamd Islamic University Quetta, and various other academia related personalities.

Six cash prizes amounting to Rs.10, 000 each were awarded in different categories of the competition. The top prize amounting to Rs.100, 000, we call it Lodin Prize for Innovation in Addressing a Local Problem was shared by two groups, one called Natural Gas Safety Systems for Homes and Offices and the other one called Online Blood Donation Management System.

The Office of Research Innovation and Commercialization (ORIC) team lead by Prof. Dr. M. Naeem Shahwani and the National Incubation Center (NIC) Quetta team lead by Director Mr. Mohammad Shah spent the whole day at URC.

The event was managed by the Final Year Project coordination team at the Information & Communication Technology headed by Dr. Yousuf Khan Naudhani, the Undergrad Research Coordinator. The event was intensively supervised by Dean Information & Communication Technology Dr. Bakhtiyar Khan Kasi and Associate Dean Dr. Muhammad Nadeem.

TISC Inauguration

Technology and Innovation Support centre was established in 2019 under the World Intellectual Property Organisation (WIPO). In association with Intellectual Property Organization Pakistan (IPO) and

Ministry of Science & Technology (MoST), Higher Education Commission (HEC) of Pakistan supports the formation of Technology and Innovation Support Centres to facilitate and promote, the research conducted by the University's faculty, staff and students in creation of intellectual property (IP) portfolio. Pro VC Mr. Faisal Khan inaugurated the TISC at ORIC on 18th December, 2020, while Deans of the respective faculties were also present during the inauguration. Pro VC Mr. Faisal Khan appreciated the efforts of ORIC team. The basic purpose is to support access to patent database systems and science and technology build technical skills for future TISC staff via training and distance learning courses, facilitate an exchange of experiences within national networks of TISCs or between different networks. TISC provides access to online patent database systems, intellectual property related publications, assistance in searching and retrieving technology information, training on searching databases, searching (novelty, state-of-the -art and infringement), technology and competitor monitoring, basic Information on intellectual property laws, intellectual property management and strategy, technology commercialization and marketing. Faculty member now can avail the perks of research at TISC ORIC using systems and printers solely for the purpose of research and intellectual property.

Research on COVID-19

The Balochistan University of Information Technology, Engineering, and Management Sciences (BUITEMS), Quetta has been at the leading edge in responding to the coronavirus (or COVID-19) pandemic. Research teams at BUITEMS are collaborating with local, regional, national, and interventional organizations in the fields of Biotechnology, Microbiology, Information Technology, Electronic Engineering, Chemical Engineering, Textile Engineering, Economics, and Sociology in making critically important contributions. Some of the notable works in our endeavors are:

- Establishment of PCR testing laboratory for COVID-19 diagnosis at Shaikh Zayed Hospital, Quetta (Established and operational)
- Development of indigenous ventilator BUITEMS Vent-I (Developed. Tested by DRAP for level-II use. Ready for mass-scale production)
- Development of Contact Tracer Application to trace COVID-19 patients for smart mitigation of the virus spread (Developed and ready for use).
- Development of COVID-19 infection forecast model based on artificial intelligence and machine-learning for the Government of Balochistan. (Presented to Balochistan Command & Operation Center (BCOC)
- Development of HAZMAT suit-A protective kit against COVID-19 (Developed. Ready for mass production).
- Production of low-cost disinfectant (Sodium Hypochlorite) to clean the public places-COVID 19 (Produced and handed over to city district administrator, Quetta Municipal Corporation).
- Production of effective and low-cost hand sanitisers by using different ingredients for COVID 19 (Produced and provided to city district administrator, Quetta Municipal Corporation).
- Combined Deep Learning and Molecular Docking Simulations Approach Identifying Potentially Effective FDA Approved Drugs for Repurposing against SARS-CoV-2 (Research under progress).
- Screening and Simulation of Highly Specific Antiviral Agents in Natural Plants Existing in the Northern Ecosystem of Balochistan: Implications to Curb COVID-19 (Research under progress).
- Detection of SARS-CoV-2 virus using isothermal loop-mediated isothermal amplification (LAMP) method in Balochistan (Research under progress).
- Assisting organizations and the government in coping with mental well-being during the pandemic (Talks organized by BUITEMS psychologists at different organizations).
- COVID-19 economic impact on the province and Pakistan: near-term planning and future preparedness (Research under progress).

Few details about ongoing projects are as under:

TITLE: Development of COVID-19 infection forecast model based on artificial intelligence and machine-learning for Government of Balochistan.

PI Name: Dr. Syed Attique Shah, Assistant Professor, Faculty of Information & Communication Technology

Goal & Objective: Develop a spatial inventory of epidemics reported in Balochistan and categorize data by date of occurrence, length of an epidemic, and magnitude.

Map and define the ecological zones of diseases that are classified as COVID-19 (Corona Virus) and other diseases.

Link the assembled data on outbreaks and epidemics to the highest geographic resolution, preferably by district or equivalent.

Identify and assemble data on important socio-economic, health systems, and environmental factors and implement a statistical analysis of their relationship with the occurrence and frequency of epidemics.

Expected Impact: Balochistan Command and Operation Centre (BCOC) consisting of health experts and academia was established to provide analyses on the impact of Covid-19 on various sectors in Balochistan. BUITEMS has contributed voluntarily by generating Big Data Analytics and Machine Learning based results for effective decision making.

TITLE: The Psychological Impact and Mental Health of the General Public and Healthcare Professionals in Balochistan during the Coronavirus (COVID-19) Epidemic.

PI Name: Dr. Kaleem U. Kakar, Assistant Professor, Department of Microbiology.

Goal & Objective: This study aims to establish the prevalence of psychiatric symptoms and identify risk and protective factors contributing to psychological stress in public health professionals and the general public.

Expected Impact: This may assist government agencies and healthcare professionals in safeguarding the psychological wellbeing of the community in the face of the COVID-19 outbreak expansion in Pakistan and different parts of the world.

TITLE: Development of HAZMAT suit-A protective kit against COVID-19.

PI Name: Dr. Syed Zameer-Ul-Hassan, Assistant Professor & Dr. Syed Kamran Sami, Assistant Professor Faculty of Engineering & Architectures.

Goal & Objective: Department of Textile Engineering developed the PPE material-based low-cost HAZMAT suit in the wake of COVID. This suit has been prepared according to the safety need of paramedical staff and society.

Expected Impact: The project has been submitted to the Government of Balochistan.

TITLE: Production of effective and low-cost hand sanitisers by using different ingredients for COVID-19.

PI Name: Dr. Muhammad Amin, Assistant Professor & Dr. Syed Kamran Sami, Assistant Professor Faculty of Engineering & Architectures

Goal & Objective: Production of low-cost hand sanitisers and disinfectants. The product will be distributed among society and the BUITEMS family.

Expected Impact: Disinfectant has been given to the Municipal Committee of Quetta City and BUITEMS for spraying at public places to reduce the risk of virus spread.

TITLE: Screening and Simulation of Highly Specific Antiviral Agents in Natural Plants Existing in the Northern Ecosystem of Balochistan: Implications to Curb COVID-19"

PI Name: Dr. Syed Zameer-Ul-Hassan, Assistant Professor & Dr. Syed Kamran Sami, Assistant Professor Faculty of Engineering & Architectures.

Goal & Objective: The main goal of the project is to identify potential plant-based compounds having activity against COVID-19. Screening (AV) agents like lycorine and PsEMPM in the selected plants.

Molecular modelling including docking and MD simulations of potential (AV) proteins. Generating data for efficient drug delivery mechanism against COVID19.

Expected Impact: Documentation/Inventory of medicinal plants from northern Balochistan with potential AV activity. In silico demonstration of identified plant-based bioactive compounds against COVID-19 using Protein-compound complex MD simulations and molecular modelling. Hassle-free drug delivery mechanism to curb infectious diseases.

TITLE: Development of a software application Trace Together for control the Pandemic COVID-19

PI Name: Dr. Bakhtiyar Khan Kasi, Associate Professor, Dean Faculty of Information and Communication Technology.

Goal & Objective: As the world is struggling to control the Pandemic COVID-19, the use of technology has been effective as well. Singapore and New Zealand are a few examples of, who used the technology to able to control the COVID-19 pandemic. Our Information & Communication Technology BUITEMS Quetta team developed an application

named as TraceTogether.

Expected Impact:

a. Care of ourselves: Get notified quickly if you have been exposed to COVID-19, through close contact. Faster information means timely care for you.

b.Care for our loved ones: Being notified earlier allows us to better protect those around us. Knowing when to isolate reduces the spread of COVID-19 to our loved ones.

c.Care for our Community: Ease the load on our front liners, and support one another to live life normally and safely. Together, we can overcome COVID-19

So by using this application turn on the connection when some in your contact list get infected by virus and will go for testing and then you will get information of the affected by COVID-19 patients of your contact listed and it will also auto-update regarding the pandemic.

Patents

01. TITLE: Silica Nanoparticles (Sinps) With Controlled Release Fertilizer (Crf) For Use On Staple Food Crops Growing Under Saline Areas.

Applicants: I. Dr. Ayesha Mushtaq, Assistant Professor, Biochemistry Department, SBK Women's University, Quetta.

II. Prof. Dr. M. Naeem Shahwani, Professor, Biotechnology Department, Faculty Life Science & Informatics, BUITEMS, Quetta.

III. Dr. M. Najam Khan Malghani, Associate Professor, Chemical Engineering Department, Faculty of Eng & Architecture, BUITEMS, Quetta.

Abstract: Silicon supplementation was explored to increase salinity tolerance in plants at the beginning of this century. Different silicon sources helped the wheat plants to mitigate the salt stress, but silica nanoparticles (Si Nps) had never been used for this purpose in Pakistan. Silica nanoparticles and controlled release fertilizer (CRF) containing silica Nps can help plants to grow better in saline and marginal areas.

A compound Controlled Release Fertilizer (CRF) was synthesized, that carried NPK and silica nanoparticles inside the core. Chitosan as the first semi-permeable coating and a polymer of sodium alginate and kaolin as an outermost superabsorbent coating of CRF. The water absorbency of CRF beads showed that they can absorb large amounts of water and double their weight. The nutrient released rate from CRF beads was very slow and sustained for six months in winters and three months in summers. The silica nanoparticles containing superabsorbent CRF was capable of releasing the nutrients slowly, withhold large amounts of water, therefore, can help plants to tolerate salt stress and survive better in drought and saline conditions. The synthesized compound fertilizer is biocompatible, biodegradable and nontoxic . Seeds of four wheat varieties, Umeed and Raskoh (salt-tolerant) and Zarghoon and Shahkar (salt-sensitive) were grown in control and different treatments. The treatments included priming wheat seeds in silica nanoparticles, supplementation of silica nanoparticles in the Hoagland's Nutrient Solution (HNS), Controlled Release Fertilizer (CRF) of HNS, CRF with silica nanoparticles and HNS in hydroponics. The same treatments were applied in the field conditions, using NPK instead of Hoagland's nutrient solution . A completely randomized factorial experiment was designed to grow wheat in the winter season in Quetta. When salt stress of 100 mM NaCl was induced, all the agronomical, physiological, chemical and phenological parameters were adversely affected as compared to the control.

The wheat was grown after priming the seeds in silica nanoparticles solution, silica nanoparticles supplementation and CRF containing silica nanoparticles showed improvement in all the growth parameters under salt stress. All the results are statistically significant at the 0.05 level. Silica nanoparticles were used for the first time, as a source of silicon, for growing wheat under salt stress. The seeds primed in silica nanoparticles solution were first to reach maturity with the highest yield. However, CRF and CRF containing silica nanoparticles were last to reach maturity and stayed green for a longer period and had higher amounts of protein and sugars in the harvested grains. Moreover, the CRF was fully decomposed in the soil, naturally by microbial decomposition. The CRF beads were not present in the pots when the soil was checked after harvesting wheat, which proved that it is environment friendly. Therefore, silica nanoparticles and CRF containing silica nanoparticles can be useful to compete with the salinity and drought stress for growing wheat in the marginal and salt-affected areas.

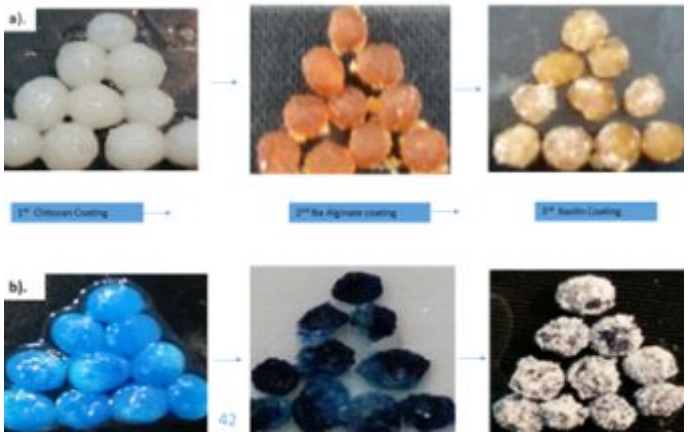
Expected Impact: As Balochistan is the largest province but due to its dry weather, it has very low agricultural activities. Less amount rainfall led to higher amounts of drought and saline land. It is a need time to increase agricultural activities in this province, particularly the production of wheat for the growing population. The agriculture in this land can be enriched by improving fertilizer's efficiency. Synthesized SiO_2 nanoparticles and the CRF

containing SiO2 nanoparticles can be used as an alternative to improve crop growth and yield under salt stress. CRF with silicon supplementation can mitigate the salt stress and improve the fertilizer's efficiency to compete for water deficit and saline conditions. Therefore, CRF containing silica nanoparticles can be useful for improving the growth of wheat varieties in the marginal areas of Balochistan. Priming of wheat seeds by silica nanoparticles showed the best results, in the improvement of salt tolerance, therefore, the priming technique can also be used economically to grow wheat in the marginal areas of Balochistan.

Schematic diagranm of different coatings in CRF beads.

(a) CS-NPK-Silica nanoparticles beads with 1st coating of chitosan.

(b) K-SA-CS-NPK-Silica nanoparticles beads with 2nd coating of kaolin and sodium alginate.



Pictures of synthesized Controlle Release Fertilizer with different coatings.

a.CRF beads made by Hoagland's nutrients for Hydroponics Experiment.

b.CRF beads made by NPK, for Soil Experiment.

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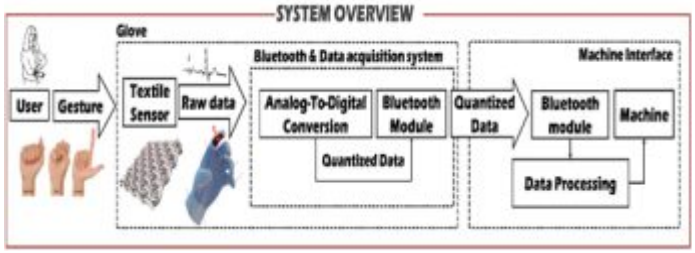
02. TITLE: Smart Glove For Deaf & Dumb To Recognize Sign Language And Human Machine Interface Using Wirelessly Communicated Piezoresistive Textile Based Sensors.

Applicants: I. Dr. Zameer ul Hassan, Associate Professor, Chairperson Textile Engineering/ Fashion & Textile Design

II. Dr. Ali Asghar, PhD

Summary : Recently smart electronic wearables have gained a reputation as assistive devices in sports, healthcare, human-machine interface (HMI), sign language and telemedicine. Despite their increasing popularity, the electronic sensing elements in these wearables are rigid, uncomfortable and costly. Instead of these rigid sensors, E-textile based sensors provide increased comfort, flexibility and applicability. Gesture recognition gloves are getting increasingly popular as human-machine interface devices. This glove is flexible, more comfortable and cost-effective as compared to the conventional human-machine interface gloves. In this work a conductive yarn with piezoresistive properties is integrated into a glove, the yarn is integrated in such a way that it is stretched and compressed with the movement of finger joints. Resistance of this yarn changes as it is stretched or compressed, this change is notable and can be used to monitor hand gestures. A portable system was designed to monitor analogue data for each gesture.



Schematic Representation of the Proposed System

The raw data was processed in MATLAB computation software. A 3d printed robotic hand was controlled with

the glove to demonstrate its application in teleoperations. The fabricated glove can effectively sense our gestures and can be used for various applications specifically in sign language and HMI.

Background: Data glove was used by NASA to interact with the simulated airflow around an aircraft at NASA laboratories [1]. Machines have been close companions to human beings for decades. The rapid increase in the number of machines means more interactions with us. The recent developments in human-machine interface technology are focused upon developing more efficient ways of communication between humans and machines. As we use hand gestures extensively in our everyday communication with human beings, these gestures can also be used to communicate with machines. To recognize these gestures and use those to control machines two main approaches are used; the first approach is to use visual-based recognition systems that extract gesture data from graphic images; the second approach is to use haptic data recognition glove based systems. The latter glove based systems are better than the visual-based systems because these are cheap, portable and require less processing power.

In the past various attempts were carried out to measure analogue haptic data using gloves and then use it to control machines, The prototypes of glove based systems were made in the 1980s, such as the MIT-LED glove which was used to track the position of the hand and then show it as a computer graphics animation [2]. The digital data entry glove [3] used to touch, proximity, tilt and inertial sensors to measure finger joint flexion and wrist tilting and was able to convert these motions into 96 ASCII letters and numbers. The Data glove [4] commercialized in 1982 was based on plastic tubes and light sensors that were able to measure and store joint angles. The Cyber Glove [5] consists of 22 piezoresistive sensors for measuring finger flexion, including software for virtual modelling. The Human glove [6] uses 20 Hall-effect sensors to measure joint bending angles for motion analysis and medical applications. Most of the aforementioned gloves use electronic sensors mounted on the cloth supports. A common drawback in this approach is a lower level of comfort and the obtrusive nature of the glove. Real-time implementation of these systems requires a lot of work in this area.

References: [1] S. Bryson and C. Levit, “The virtual wind tunnel,” IEEE Comput. Graph. Appl., vol. 12, no. 4, pp. 25–34, Jul. 1992.

[2] D. J. Sturman and D. Zeltzer, “A survey of glove-based input,” IEEE Comput. Graph. Appl., vol. 14, no. 1, pp. 30–39, Jan. 1994.

[3] G. Grimes, “Digital data entry glove interface device,” U.S. Patent 4 414 537, AT&T Bell Lab, Murray Hill, NJ, USA, 1983.

[4] T. G. Zimmerman, “Optical flex sensor,” U.S. Patent 4 542 291, Sep. 29, 1982.

[5] P. Coiffet and G. C. Burdea, Virtual Reality Technology. New York, NY, USA: Wiley, 2003.

03. TITLE: Developing A Lightest Bullet Proof Vest By Developing A Comprehensive Conceptual Model And Vice Versa

Applicants: I. Dr. Zameer ul Hassan, Associate Professor, Chairperson Textile Engineering/ Fashion & Textile Design

II. Dr. Ali Asghar, PhD

Summary : The normal bulletproof jacket used in Pakistan is very heavy approximately its weight is 15 to 18 kg and having low protection features. It is very difficult to carry the weighted bulletproof jacket in wars. Secondly, it cannot be used by Females and children's due to high weight. We are producing a bullet proof jacket with many features such as Lightweight, High protection and can be used by Females and children's too. It is suggested to develop an antiballistic model to develop an Ultra-lightweight bulletproof jacket equipped with textile-based shielding for high protection performance. It would be highly resistant to bullet penetration and more effective than the old bulletproof jacket. It will have properties such as lightweight than the currently used vests, which would be very easy to carry. Secondly, it would be more comfortable. It would have the property of storing the bullet for the evidence rather than to reflect it. Our main goal would be focused to reduce the weight of the vest and increase the protection performance. This would not only be beneficial for army, law enforcement agencies and security guards but also for a common man who has suffered a lot of loss in our imposed war against terrorism.

Background: In the 1500s, solid metal armor designed to withstand firearms. It was made up of Milan, possibly of Damascus steel. In the English Civil War (1642 - 1651) Oliver Cromwell's cavalry were equipped with double-layered metal cuirasses (vests) that were designed to be bullet proof [1]. When a 16th century European blacksmith finished making armor that was impervious to firearms, he fired a shot at the breastplate, denting it. As the story goes, this dent was proof to his customer that the

armor would stand up to a bullet, so it became known as "the bullet proof." Since then, the history of bulletproof vests has been anything but a straight shot [2]. In the late 1800s, both Japan and Korea developed some of the first modern bulletproof vests when they discovered that 30 layers of silk fabric could stop the black powder bullets of the day. This "soft armor" laid the foundation for numerous inventors who tried to improve upon the idea as firearms became more powerful [3, 4].

A priest from Chicago named Casimir Zeglen, with the help of fellow inventor Jan Szczepanik, devised a special way to weave a 1.6mm steel plate between four layers of silk. Zeglen claimed his 1/8" thick, 1/2 lb. vest could stop a .44 caliber—and he proved it when he volunteered to be shot before a live audience in New York City. When he was struck by the bullet at only 10 paces, he said he felt just "a tap." Zeglen and his "bullet proof cloth" became an overnight sensation [5]. In 1920 to 1935 bulletproof jacket gave the deflected .38 bullet. This vest weighed 11 lb (5.0 kg), fit close to the body, and was considered more comfortable than the previous types of bulletproof vests [6, 7].

References: [1]. http://www.tigerflare.com/component/content/article/1-latest-news/351-ballistic-vest-review

[2]. Ricketts, H, Firearms p. 5

[3]. Edwards, Josh (May 2, 1980). "George Goodfellow's Medical Treatment of Stomach Wounds Became Legendary". The Prescott Courier. pp. 3–5

[4]. "The Landlord's Protective Garment". The Cork Examiner. December 6, 1847.

[5]. Seoul Yonhap News Agency, 1 April 2008

[6]. Williams, Allan (2003). The Knight and the Blast Furnace: A History of the Metallurgy of Armor in the middle Ages & the Early Modern Period. Boston: Brill Academic Publishers. ISBN 978-90-04-12498-1.

[7]. David Payne. "Body Armor for the Western Front in the Great War".

03. TITLE: Study On The Effects Of Silver Nano Particles (Agnps) In Epoxy Monomers Based PDLC Films (Smart Glass).

Applicants: I. Mujtaba Ellahi, Assistant Professor, Department of Chemistry, Faculty of Arts & Basic Sciences,

Summary : The outcomes of this study will show important rewards for industrial technology especially, in the Glass Industry. PDLC films and develop the PDLC market, especially in the glass industry in our country. Electro-optical (E-O) characteristics of smart glass make them impeccable for numerous applications in various areas, for example, elastic smart glass displays, switchable frames, vegetal orchard and additional technological display instruments. Besides, this project will lead to the building of new technology in the Glass and Polymer industry in Pakistan. Smart glass or Polymer-dispersed liquid crystals (PDLCs) represent an important class of materials with several unique electro-optical (E-O) applications such as windows, digital signage, light modulators, complex billboards, fibre optical devices and public display due to high transmittance and high light shading as well as high mechanical stability. Advantages, PDLC films have been the subject of much academic and industrial research in the past decades due to good E-O properties, simple manufacturing process and long-term durability.

Directorate of University Advancement & Financial Assistance (UA&FA)

YEAR IN REVIEW

Total Beneficiaries 3034

Amount Disbursed 132,332,100/-

Applicants Reviewed 6000 +

Stipend Cheques Disbursed 1100 +

Online Facilitation 17,418

Awardees of Extra–Curricular and Sports 79

Like countless other organizations nationwide, Financial Assistance Office has adjusted its operation in response to the coronavirus pandemic and associated public health orders. The financial Assistance office curtailed its awarding ceremonies, in-person interviews but one thing has not changed our core work of awarding scholarships and providing Financial Assistance counselling. Financial Assistance staff provide counselling to hundreds of students via virtual advising sessions and responded to the queries through emails and social media.

Main Course of activities throughout the year:

Institutional Scholarship Award Committee (ISAC) meeting was conducted for Ehsaas Scholarship Program on May 11, 2020

Balochistan Education Endowment Fund Cheque Distribution 25 June-29 June 2020. OGDCL Stipend Distribution, August 17, 2020.

Ehsaas phase 1 UG Program Stipend distribution September 29 – October 1, 2020.

Online interviews of Begum Syeda Mubarika Scholarship Awardees were conducted on December 02, 2020.

The Buitems Financial Assistance Office is grateful to the following donors for their generosity and support throughout the year.

- Ehsaas UG Scholarship Program
- Oil & Gas Development Co Limited
- Babar Ali Foundation
- DIYA
- Professional Education Foundation Talent
- National Endowment Scholarship (NEST)
- Punjab Endowment Education Fund
- Balochistan Education Endowment Fund (BEEF)
- Sui Southern Gas Company (SSGC)
- Dr. Sareer Ara
- HEC BAL-FATA Scholarship
- USAID

University Advancement & Alumni Relation

At University Advancement Office we are committed to fostering mutually beneficial relationships with alumni, trusts/foundations, the corporate sector, international partners, officials, media, and the general public. We intend to build and maintain a relationship based on fidelity and integrity to raise funds for the advancement of BUITEMS. We strive to offer a range of activities to alumni, graduating students, and build relationships with potential donors as a way to increase donations and maintain lifelong relationships with alumni.

Alumni relations are of strategic importance for BUITEMS. To achieve its goal of maintaining a life-long relationship, the Directorate of UAFA developed a comprehensive database of BUITEMS Alumni. We keep our alumni informed through different media like Newsletters, Annual Reports, e-mails and a Facebook group 'BUITEMS Alumni Association'. BUITEMS has so far produced 9752 graduates in different disciplines. Our alumni are residing & serving throughout Pakistan and almost in 26 countries of the world.

Alumni generate invaluable word-of-mouth marketing among their social and professional networks. By engaging alumni, we can continue to benefit from their skills and experience. Our alumni are our international ambassadors. They take their knowledge of our institution to their hometowns and countries and into their professional and social networks. BUITEMS Alumni Relation Office is in continuous contact with Alumni and engages them throughout the year.

BUITEMS ALUMNI SUCCESS STORIES

Mr. Khurram Sharif

Mr. Khurram Sharif has completed his BS (CS) from BUITEMS in 2006 and earned MS (CS) degree from the University of Management and Technologies (UMT), Lahore in 2009. A “C-Level” technology executive with more than 16 years of experience.

With his primary focus and passion for computer programming, Mr. Khurram has developed the first official website of BUITEMS in his 2nd semester of studies and maintained it throughout as a Web Developer.

After completion of BS (CS) from BUITEMS, Mr. Khurram started his career as Software Engineer at EduSoft System Solutions and for 8 months he was offered a job as Team Lead in GreenFin Technologies.

During MS (CS) studies, Mr. Khurram has been working with offshore clients from different states of the USA, UK and Canada. He has been also involved in IT policy making and strategies of Medical and Fitness industries in New York City, USA, Ontario and Canada respectively. He resumed his professional career after MS (CS) completion and has been working with offshore international companies for 10 years. Currently, Mr. Khurram is heading the ICT portfolio as Chief Information Officer (CIO) that one of the largest international project (CPEC) in the history of Pakistan. His current set of duties involves Cloud-based infrastructure and Intranet Systems. Conducting organization-wide Business Process Reengineering (BPR) and automation of key business process through prioritization in collaboration with the key stakeholders. Machine Learning, Crypto Currency, Data Science and Digital Marketing are the current set of interests he is following.

Mr. Muhammad Aslam Umrani

Mr. Muhammad Aslam Umrani has done his BS in Petroleum & Gas Engineering from BUITEMS. Currently, he is working in the capacity of Provincial Director Balochistan in the Ministry of Energy (Petroleum Division) and looking after the matters pertaining to oil and gas exploration and production.

Moreover, he is also engaged in the monitoring of all statistical data like oil, gas, LPG production, D&P Leases Field development plans exploratory licenses and financial obligations of E&P Companies like Production bonuses, training funds, social welfare, royalties and other levies of Balochistan province. He holds Technical and extensive practical skills in planning and managing oil and gas rigs with an intense focus on their scope, deadlines, cost and HSE. After graduating from BUITEMS he started his career working with OGDCL as Production Engineer from 2009 – 2013 at Uch Gas Field Balochistan in the production department as “Assistant Engineer Production”. He served the national company for 6 years for implementation of infill drilling and production options to successfully manage the decline of the mature fields and maximize future production opportunities through evaluation and quantitative interpretation techniques. Then he switched from National Organisation to a Multinational organisation to gain some international standards exposure and served as a drilling and completion Engineer in UEPL (Former British Petroleum) There he was engaged in planning, design and supervision of drilling and completion of the Wells from 2013– 2020. After 2 years of a short period and his tremendous performance, he was promoted as team lead Workover operations, which is a very difficult field in terms of well killing and fishing milling. He accepted this challenging position and proved himself by managing a team of engineers .

in the drilling and completions team as their Team Lead for 5 years

Mr. Farooq Ahmed

Aldous Huxley once said, "to travel is to discover, that everyone is wrong about other countries". I second this quote, as travelling is my passion. To discover me, it was necessary to discover different parts of the world. Travelling, as I recount, certainly enhanced my learning capability, and flexed my aptitude towards new understandings of life.

Probably my passion was somewhere at the back of my mind when I decided to enrol at "Southwestern University Philippines", for graduated in civil engineering discipline in 1991, and later graduated in 1994. My stay abroad provided me with ample opportunities to travel and to discover. On my return to Pakistan, I joined the Balochistan Irrigation Department as Assistant Engineer. As a Water Engineer, I am involved in projects relating to water conveyance/ distribution systems, stormwater management, and water/ wastewater treatment. My responsibilities include writing and editing technical reports, using ArcGIS and PCWMM to create hydraulic models for conveyance/ distribution systems and stormwater management. During these years, I have been posted at different parts of Balochistan; it kept my travelling passion alive. In due course, I met new people and experienced their culture and traditions. I discovered new destinations in Baluchistan. I often share and trek my experience of travel with my fellows and on social media and realized that travel and change of places impart new vigour to the mind. I am always eager to perk-up my education and earn a master in the engineering discipline. Unfortunately, no institution in Quetta may offer MS Degree in Civil Engineering. The only way to do so was to enrol in UET Khuzdar or outside the province, which was not possible. However, there appeared a silver lining when BUITEMS offered an MS degree course in "Environmental Management and Policy", as an evening programme in 2004. I found the program course interesting, and the fact that study/ class timing was appropriate. I did not hesitate to apply for the Programme and was enrolled, with around twenty other fellows.

"Environmental Management & Policy" course contents, in later years, helped me to have a better understanding to work in water resources development, watershed management, environmental remediation and air pollution control. This would become possible due to my learning at the august Institution of BUITEMS and the education I received through the Environmental Management Program."

The real asset, which I earned, is my life long relationship with faculty members of the Environmental Management Department, in terms of high memories for their sincerity in imparting the knowledge and dedication towards their areas of specialization. I found them very approachable and contented to help me, whenever I entangled in a professional quagmire. I bow before Professor Dr. Maqsood Ahmad & Amir Mehmood for their mentorship. After my above mentioned academic years, I have embarked on a never-ending voyage with a destination beyond the horizon, the journey of knowledge and quest of unknown.

Mr. Amir Mehmood Shaikh

Amirs' believing – Whenever there is will there is a way, with strong commitment and following your dreams/passion to achieve anyone can create ways for a successful life. Of course, life is too short and challenging, and I started accepting challenges and that enabled me to learn and strive best for more success. Being an extrovert person and inspired by leadership qualities, I always try my best efforts for motivating and helping others for the betterment of society and the economy of Balochistan in particular, (the least developed province with plenty of natural resources to capitalize on). Capturing good moments (photography), going on long drives and travelling around the world are my best hobbies.

I did my MBA from BUITEMS, During my MBA studies I was an average student, but with consistency and hard work, I completed my postgraduate by availing HEC-USAID merit and need based scholarship. I dedicate these accomplishments and academic successes to the efforts of teachers, and BUITEMS. I started my professional career right after completing my studies and had the opportunity to work with different well renowned national and international organizations of Pakistan. I have gained my expertise in the field of Administration, operational management, Finance, HRM and Grants.

Currently, I am working with the Food and Agriculture Organization of the United Nations (FAO) in the capacity of Grants Associate. I aim to implement 100% merit for actual and deserving grantees complying with set standards and to implement project activities to enable Balochistan as an agriculture-based region.

I am very grateful to BUITEMS, HEC, USAID, Faisal Nadeem (my mentor), Haris Rahman (Batch mate), and all my friends and family members.

Mr. Saifullah Khan

Every one of us can create a story to share. Some of these stories can be heartbreaking, some can be uplifting, and some stand out to inspire others. What matters is that we can learn from each other's' stories and use those lessons to succeed in goals. I love reading stories. I love how I delve into the characters and how they overcome struggles, compete, and win life's battles. I have learned valuable lessons from the stories I have read. Most of them I have applied to my life's journey at work, my career, and other things I am passionate about. Whenever I lost the motivation to accomplish my goals, the stories I read became the source of strength and inspiration. I was born in Quetta the capital city of Balochistan. I did MBA (Banking & Finance) from BUITEMS in 2012. This study program broadened my expertise and knowledge by enabling me to be a useful asset for my province and country. After successful completion of my MBA, I started my professional career at Balochistan Scouts Association as an internee and left as a Program Associate. Later on, I joined the Governance Support Program (GSP) as Program Officer and worked for one year. I got appointed as Research Officer (B-17) in Planning & Development Department through Balochistan Public Service Commission. At present, I am working as an Assistant Chief in the P&D Department. My responsibilities include preparing the Public Sector Development Program of Balochistan and formulate all development/planning policies by ensuring optimal utilization of available resources. BUITEMS brought a huge change in my life by providing me with unique opportunities to pursue my goals and targets. It not only helped me academically but also enabled me to be a useful asset for my province and country. The entire management played a vital role in my career counselling and advancement. I believe my story will inspire the students of BUITEMS and they will utilize their time wisely for bringing a change in themselves and their country.

BUITEMS ALUMNI ACHIEVEMENT

Mr. Mayen Khan

BUITEMS Alumni Mayen Khan is an environmental activist and a beginner in the field of wildlife photography, recently he participated in the UNDP's Short-documentary contest on “Mountain Bio-Diversity” held on International Mountain Day 11th December 2020 and got 1st position. The contest was sponsored by UNDP Pakistan, Embassy of Italy Islamabad and the Italian Agency for Development Corporation. His short documentary was titled “Balochistan – A lost Wilderness”. Mayen believes that photography is one of the best ways to connect people with the natural world, as well as, photography can inspire a love of wildlife and a desire to protect it. Many endangered animals in Balochistan are at risk of extinction. Mayen is using the tool of visual communication to address the environmental and wildlife issues in Balochistan.

His main objective, behind wildlife photography, is to snap the endangered species of Balochistan and acquire the feed-back of local communities regarding the conservation of species that are on the brink of extinction. He believes that the more people are aware of the dangers to the eco-system the more they will be in favour of the sustainable use of natural resources. He sends his utmost gratitude to all the people that helped him in achieving this goal, which includes people at Balochistan Forest and Wildlife Department, WWF-Pakistan, his teachers and mentors at BUITEMS, University of Balochistan and members of the local communities that accompanied him on his trips.

BUITEMS NUMBER OF GRADUATES

S.No	Degree Program	Male	Female
1	BS-Computer Science	357	86
2	BS-Computer Engineering	427	78
3	BS-Information Technology	220	57
4	BS-Telecom Engineering	360	59
5	BS-Electronic Engineering	624	53
6	BS-Electrical Engineering	177	11
7	BS-Software Engineering	117	30
8	BS-Petroleum & Gas Engineering	662	07
9	BS-Mining Engineering	247	01
10	BS-Civil Engineering	603	16
11	BS-Geological Engineering	282	03
12	BS-Textile Engineering	340	13
13	BS-Chemical Engineering	412	10
14	B- Architecture	111	48
15	BS-Mechanical	99	01
16	BS- Environmental Science	10	07
17	BS-Biotechnology & Informatics	187	211
18	BS-Microbiology	35	59
19	BS-Social Sciences	31	06
20	BS-International Relations	127	24
21	BS-Physics	35	07
22	BS-Mass communication	52	32
23	BS-Fine Arts	22	24
24	BS-English	43	30
25	BS(Chemistry)	00	01
26	BS-Math's	16	10
27	BS Sociology	09	04
28	BS(Business Studies)	14	04

29	BS(Business Administration)	735	317
30	BS(Public Administration)	04	00
31	BS-Economics	182	54
32	MBA	778	302
33	MBA (Banking & Finance)	228	99
34	MS- Computer Science	44	24
35	MS- Computer Engineering	11	03
36	MS- Information Technology	08	05
37	MS- Telecom Engineering	11	04
38	MS- Electronic Engineering	22	06
39	MS- Electrical Engineering	13	01
40	MS- Mining Engineering	08	00
41	MS- Civil Engineering	34	00
42	MS- Textile Engineering	03	02
43	MS-Chemical Engineering	07	02
44	MS Environmental Management & Policy	42	12
45	MS- Biotechnology & Informatics	59	52
46	MS- International Relation	15	01
47	MS- Physics	27	05
48	MS-English	07	11
49	MS-Mathematics	08	02
50	MS-Chemistry	06	03
51	MS-Economics	20	07
52	MS- Management Sciences	17	28
53	PhD-Management & Economics	01	00
54	PhD-Bio Technology and Informatics	07	02
55	PhD- Management	01	00
56	PhD- Environmental Management & Policy	01	00
	Sub Total	7918	1834
	Total Alumni	**9752**	

BUITEMS Career Services Office Report -2020

A.Total Workshops /Seminars sessions conducted = 6

1. Online Session on Brighter Side of Isolation and Students' mental well-being

   Ms. Mary Pervaiz
   Guest Speaker — 21st May 2020

2. Online session on Mental Health with Iqra Reza

   Ms. Iqra Reza
   Guest Speaker — 06th July 2020

3. Session on Resume, CV and Cover letter writing for BS Sociology Students

   Mr. Ali Zain
   Manager Job Placement & Internship — 10th October 2020

4. Online Session on MPhil Education and Leadership programme (LUMS)

   Sarah Mehmood
   Guest Speaker — 22nd October 2020

5. Session on CV/Resume and Cover letter writing for BS IR Students

   Mr. Shams Ur Rehman
   Manager Career Services — 5th November 2020

6. Session on Resume, CV and cover letter writing BS English Literature Students

   Mr. Shams Ur Rehman
   Manager Career Services — 19th December 2020

B. Number of Students (1100) Facilitated in Seminars, Workshops, individual & Group Counseling Sessions.

C. Number of Students (500) Facilitated Through Individual Career Counselling Sessions

- Choosing major
- Entrepreneurship and Business Idea Development
- Experiential learning (Internship, Field visits, Apprenticeship, Case studies)
- Exploring professional career development opportunities
- How to choose your major
- Job Interviews and Mock interviews sessions
- Job search strategies
- Networking and Informational Intertwines
- Overseas Scholarships, exchange programs and other professional career development opportunities.
- Personality Interest and Skills assessment
- Resume writing, Resume critiques, Cover Letter writing
- Scope of different occupations
- Learn decision-making skills, especially as related to significant choices like one's major or career direction.
- Explore other issues (stress, family, finances, etc.) which may make it difficult to focus on choosing a major or career.
- Stress management.
- Explore what kind of work might be satisfying.
- Narrow their interests.
- Research different majors and occupations.
- Discuss academic struggles.

Number of students Facilitated through individual & Group Counseling in 2020

Individual counselling	500
Group counselling	600
Total =1100	

C-Job and Internship Placement

Career Services Office developed strong industry linkages and developed employers' database of key employers to enhance experiential learning and employability of students and graduates.

Graduates placed indirectly through Walk-In Interviews and sharing graduates profile to relevant employers

S. No	Name of Employer	Number of Vacancies
01	Neela Sapphire Fibres	01
02	Jaffer Brothers (Pvt.) Ltd	01

03	Oxford University Press	01
04	HerDomain Company	02
05	Cotton Web	05
06	UNICEF (Project Staff)	25
07	Meezan Bank	05
08	COMSATS (Project)	06
09	TCS	03
10	BUITEMS Urban Project	04
11	Nestle	02
12	Serena Hotel Quetta	03
13	Bank Islami	10
14	Fauji Cement	06
15	Company IDO	02
	Total (Graduates hired)	**76**

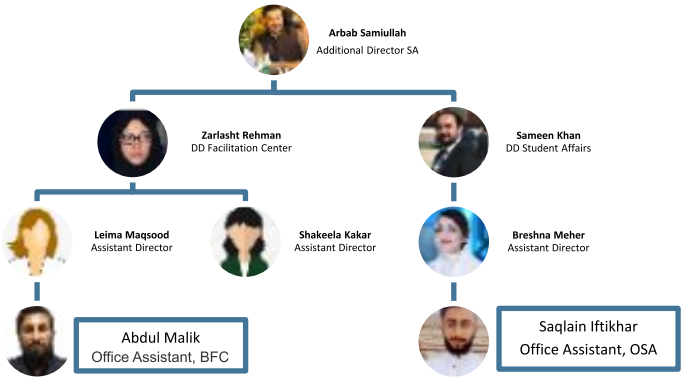
b. List of Students placed in different organizations for Internship (2020)

S. No	Name of Organization	Number of Students
01	BRSP Winter Internships	27
02	Mari Petroleum Company Limited	28
03	Cotton Web	03
04	Nestle Internship	04
05	Al Falah Bank	02
06	Allied Bank	03
07	Asadullah Warzaghani Associates Quetta	02
08	Benazir Hospital Quetta	02
09	BINUQ Quetta	06
10	Bolan Medical College Quetta	06
11	CAMEOS, Quetta	06
12	Cherat Cement Company Limited Karachi	03
13	Civil Hopstila Quetta	02
14	CM Internship	03
15	CMH, Quetta	07
16	DG Khan Cement Company Hub	03
17	DHA, Quetta	02
18	Environmental Protection Agency	03
19	Fatima Jinnah Hospital Quetta	06
20	Federal Board of Revenue	02
21	Fauji Fertilizer Company Limited	03
22	Guddu Thermal Power Plant	04
23	Habibullah Sugar mills Ltd	06
24	Habibullah Coastal Power Plant Company	10
25	ICI Pakistan, Karachi	03
26	Karachi Gymkhana	02
27	K-Electric	05
28	Lahore Electric Supply Company Limited	02
29	Mineral Development Department, KPK	03
30	Muslim Commercial Bank, Quetta	03
31	Meezan Bank, Quetta	02
32	MovenSol, Quetta	07
33	National Bank, Quetta	03
34	National Highway Authority	07
35	Nishat Linen, Lahore	03
36	National Transmission & Despatch Company	06
37	OGDCL	35
38	Pak Data Com	03
39	Provincial Disaster Management Commission	09
40	PEL	06
41	Pakistan Petroleum Limited	08
42	PTCL	21
43	PTV, Quetta	03
44	Qadri Associates	02
45	St.Mary's Church Cantt, Quetta	03
46	Sama News Quetta	04
47	Sidra International Pvt Ltd, Karachi	02
48	Small Industries Wing, Quetta	03
49	Software House, Lahore	03
50	State Bank, Quetta	02
51	Uch Powerplant, Hub	07
52	Uch Powerplant Dera Murad Jamali	08
53	WAPDA	16
54	Weather Ford, Islamabad	02
55	Web Cotton, Lahore	07
56	ZKB Consturctions Quetta	03
57	Zong	02
58	Others	78
	Total Internships	**416**

Directorate Of Student Affairs

Directorate of Student Affairs is dedicated to delivering high quality, co-curricular programs and services in a learning environment that supports students' holistic growth and achievement of essential life skills to actualize their full potential to be responsible, engaged, and successful citizen in a national and global environment. Other than that it is also the right forum to seek guidance, facilitation and support regarding any academic and non-academic issues.

Our Team



Our Offices

Office of the Student Affairs

BUITEMS Facilitation Center (BFC)

The BUITEMS Facilitation Center (BFC) is the right forum to seek guidance, facilitation and support regarding queries pertinent to any academic and non-academic issues.

The BUITEMS Facilitation Center (BFC) is the right forum to seek guidance, facilitation and support regarding queries pertinent to any academic and non-academic issues.

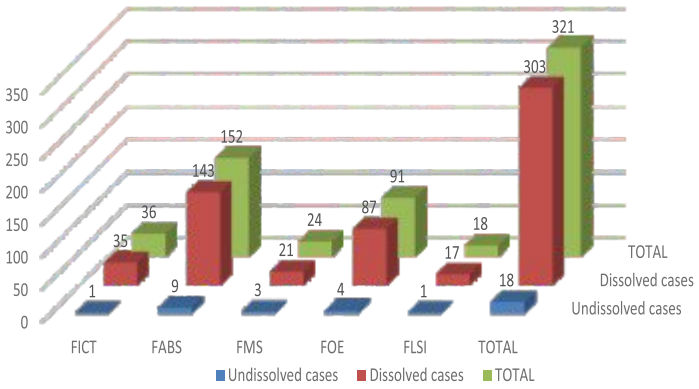
Core Values

- Facilitation Services
- Commitment
- Empowerment
- Collegiality

BFC Services

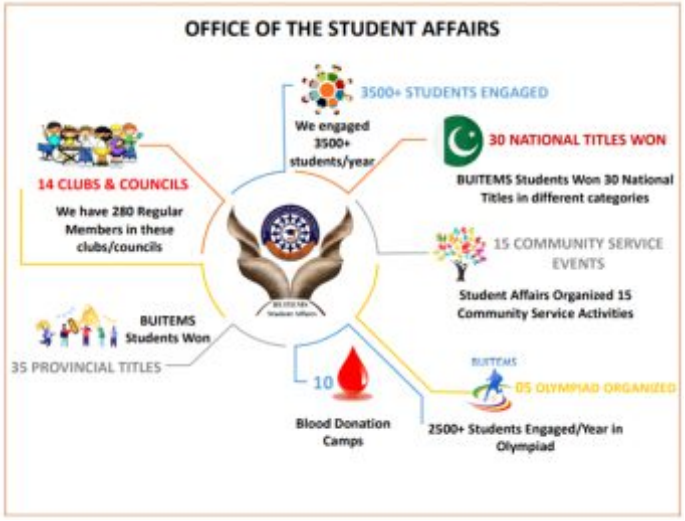
- Provision of Academic certificate related matters
- Facilitation in clearance, transcript and degree issuance of graduates.
- Students fee issues
- Exam Entry Coupon Issuance matters
- Students refund issues
- Scholarship matters
- Disciplinary issues
- Interdepartmental coordination & cooperation issues
- Peer to Peer support and grievance resolution
- Others as may arise

Progress Report



Office Of The Student Affairs

Office of Student Affairs is dedicated to delivering high quality, co-curricular programs and services in a learning environment that supports students' holistic growth and achievement of essential life skills to actualize their full potential to be responsible, engaged, and successful citizen in a national and global environment.



Our Goals

- Be Students Centric
- Improve Educational Experience
- Appreciate and Share our Diversity

Core Values

- Celebration
- Community
- Collaboration
- Diversity
- Empowerment
- Excellence

Our Services

Office of Student Affairs at BUITEMS work with students, faculty, staff, and community partners to deliver programs and services to enhance students' experience at BUITEMS.

Our work also shapes the culture of our campus community that cares, understands and connects one another.

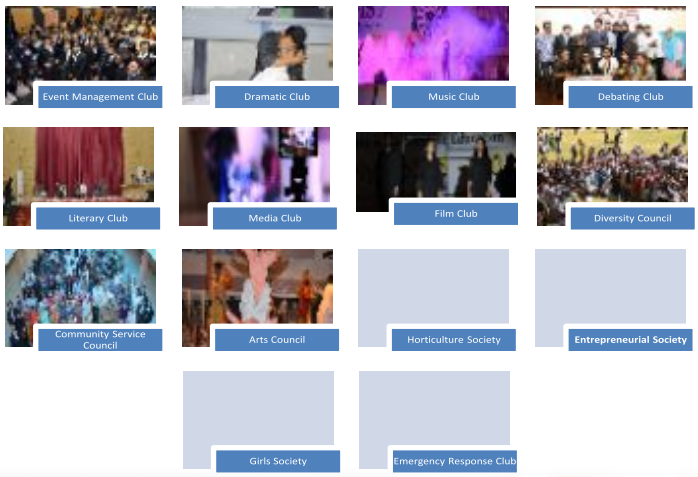
Student Affairs foster students' intellectual, personal and professional growth, and prepare them for success on campus and beyond graduation.

Most importantly, we strive to create safe, diverse, and stimulating environments responsive to student needs.

We encourage students and parents to take advantage of the variety of activities and services we offer.

The Division of Student Affairs has 14 clubs and councils.

CLUBS AND COUNCILS



Directorate Of Human Resource

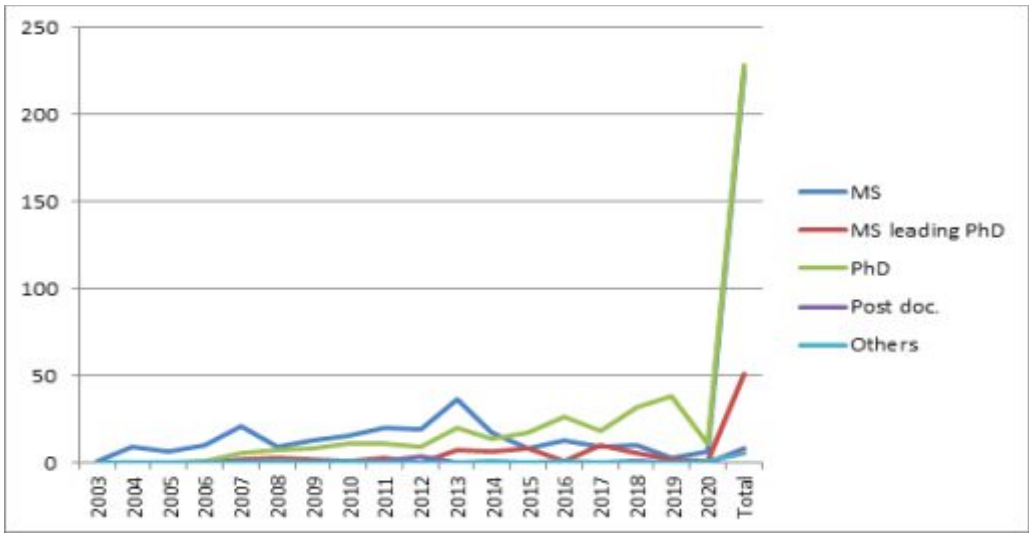
Investing in Faculty Development ensures the cultivation of more inclusive student learning and provides the best educational practices to all the students, including those traditionally underserved by higher education. BUITEMS invested in Faculty Development and more than 500 newly inducted teaching faculty had taken advantage of the opportunity to enhance their capacity building and learning innovation.

Several scholars proceed each year for strengthening their efficiency and effectiveness of teaching and learning. The number has been less this year due to COVID-19, the global pandemic, but to improve quality education, the enthusiasm of the teachers remains at its highest peak.

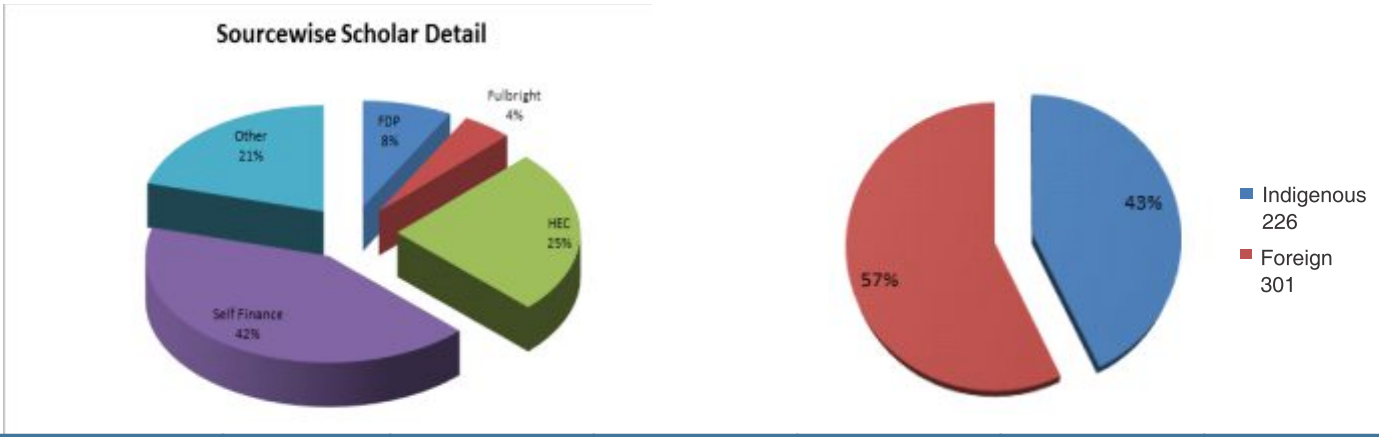
BUITEMS Scholars proceeded for MS/MS Leading to PhD/PhD during the years 2003-2020

Proceeded in years	MS	MS leading PhD	PhD	Postdoc.	Others	Total
2003	01	00	00	00	00	01
2004	09	00	00	00	00	09
2005	06	00	00	00	00	06
2006	10	00	01	00	00	11
2007	21	02	05	01	00	29
2008	09	03	07	00	01	20
2009	13	02	08	01	00	24
2010	15	01	11	00	01	28
2011	20	03	11	01	00	35
2012	19	00	09	04	00	32
2013	36	07	20	00	00	63
2014	17	06	14	00	01	38
2015	08	08	17	00	00	33
2016	13	01	26	00	01	41
2017	09	10	18	00	00	37
2018	10	05	32	01	00	48
2019	03	02	38	00	00	43
2020	06	01	11	00	01	19
Total	**255**	**51**	**228**	**08**	**05**	**517**

Summary Scholars Proceeded during the year 2003 to 2020



Source Wise Number of Scholars in Tabular Form							
S.no	Sources	MS/ME/ Master/ M Phil	MS Leading to PhD	PhD	Postdoc	Others (Certification etc)	Total
01	FDP	08	21	12	00	00	41
02	Fullbright	08	03	11	00	01	23
03	HEC	10	38	77	03	01	129
04	Self-Finance	160	04	51	00	02	217
05	Other	30	07	63	05	02	107
Total		**216**	**73**	**214**	**08**	**06**	**517**



Country Wise Scholars Data Proceeded during the Years 2003-2020						
Country	MS	MS leading PhD	PhD	Postdoc.	Others	Total
Pakistan	149	07	67	00	02	225
China	10	02	37	03	00	52
Australia	16	02	08	01	00	27
Germany	04	04	05	01	00	14
USA	08	03	18	00	02	31
UK	11	01	09	01	00	22
Thailand	00	01	08	00	00	09
Malaysia	12	06	40	00	00	58
New Zealand	02	00	15	00	00	17
France	01	03	07	00	00	11
South Korea	04	13	07	00	00	24
Japan	04	03	02	00	00	09
Italy	02	06	01	00	00	09
Sweden	01	00	02	00	00	03
Finland	00	00	02	00	00	02
Canada	01	01	02	00	00	04
Turkey	01	03	04	00	00	08
Bronai	01	00	00	00	00	01
Norway	00	00	01	00	00	01
Spain	01	00	00	00	00	01
Belgium	00	00	01	00	00	01
Czech Republic	00	02	01	00	00	03
Sri Lanka	02	00	00	00	00	01
Greece	00	00	00	01	00	01

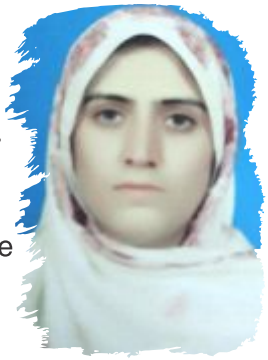
Brazil	01	00	00	00	00	1
Qatar	00	00	01	00	00	1
Total	**231**	**57**	**238**	**07**	**04**	**536**

Scholars Data Sheet in Tabular Form 2003-2020							
Years	Status	MS/ M Phil	MS Leading to PhD	PhD	Postdoc	Others (Certification)	Total
2003	Enrolled	01	00	00	00	00	01
	Completed	00	00	00	00	00	00
2004	Enrolled	09	00	00	00	00	09
	Completed	00	00	00	00	00	00
2005	Enrolled	06	00	00	00	00	06
	Completed	00	00	00	00	00	00
2006	Enrolled	10	00	01	00	00	11
	Completed	02	00	00	00	00	02
2007	Enrolled	21	02	05	01	00	29
	Completed	18	00	00	00	00	18
2008	Enrolled	09	03	07	00	01	20
	Completed	16	00	00	00	00	16
2009	Enrolled	13	02	08	01	00	24
	Completed	04	00	00	00	01	05
2010	Enrolled	15	01	11	00	01	28
	Completed	11	00	03	02	00	16
2011	Enrolled	20	03	11	01	00	35
	Completed	09	00	06	00	00	15
2012	Enrolled	19	00	09	04	00	32
	Completed	10	00	03	00	01	14
2013	Enrolled	36	07	20	00	00	63
	Completed	19	00	03	03	00	25
2014	Enrolled	17	06	14	00	01	38
	Completed	08	00	08	00	00	16
2015	Enrolled	08	08	17	00	00	33
	Completed	02	00	04	00	01	07
2016	Enrolled	13	01	26	00	01	41
	Completed	06	01	03	00	01	11
2017	Enrolled	09	10	18	00	00	37
	Completed	03	00	04	00	00	07
2018	Enrolled	10	05	32	01	00	48
	Completed	06	05	06	00	00	17
2019	Enrolled	03	02	38	00	00	43
	Completed	06	04	18	00	00	28
2020	Enrolled	06	12	00	00	01	19
	Completed	06	00	08	00	00	14
Total Enrolled from 2003 to 2020							**517**
Total Completed from 2003 to 2020							**211**

PhD Profiles

The following are our faculty members who recently joined back the university after completion of PhD in their respective programs.

Dr. Imrana Niaz Sultan



I completed my Ph.D degree from Kasetsart University, Bangkok, Thailand in September 2020 under the dynamic supervision of Dr. Pramuk Parakulsuksatid. My research title was “RECOMBINANT EXPRESSION OF CELLULASE GENES IN SACCHAROMYCES CEREVISIAE INVSc1”. Currently, I am working as an Assistant Professor in the Faculty of Life Sciences and Informatics, BUITEMS.

The tremendous experience of working in the Fermentation Technology Research Center (FTRC) helped me groom my lab skills and modified myself into a goal-oriented, adaptive and zealous learner. The devoted guidance of my advisor leads me towards innovative research in the fields of Genetic Engineering and Biochemical Engineering. I introduced a novel method of making genes' cassette, termed as the “Gene Assembly and Ligation (GAL)” technique. Moreover, by gene manipulations, I could produce two novel strains of thermotolerant Saccharomyces cerevisiae that converted the lignocellulosic material into bioethanol for industrial production purpose. I attribute my success, skills and knowledge to the dedicated guidance of my Advisor and support of BUITEMS during my studies.

Dr. Mehr Gul Buzdar

I received my PhD degree in Electrical Engineering on March 25, 2020, under the guidance of Prof. Dr. Tai Nengling. Currently, I am working as an Assistant Professor at BUITEMS. I worked on the Evaluation of Wind Energy Production and Transmission for the South-western Region of Pakistan. Working in Prof. Tai's lab was a great experience and an opportunity to engage and initiate multiple research topics and collaborations. Dr. Tai always encouraged us to explore new fields to get a broader perspective and bring together new ideas and methods to solve interesting problems. I feel that this freedom and creativity to think outside the box have bettered me as a researcher and helped to prepare me for my current position.

Dr. Atiq Ur Rehman Marwat

I received my PhD degree in Electrical Engineering from North China Electric Power University, Beijing, China, on 6th June 2020. I have worked on “Modelling and Analysis of LCC based UHVDC System under Hierarchical Connection Mode with Reactive Power Compensators”. During my PhD studies I have worked in the State Key Laboratory of Alternate Electric Power System under the supervision of Prof. Chengyong Zhao and Prof. Chunyi Guo. It was a wonderful and great experience to conduct my research under their supervision. I have published 7 SCI-indexed articles and 5 EI indexed conference papers during my PhD research work. I have been awarded the “Excellent Student Award” for the year 2018-2019. Currently, I am working as an Assistant Professor in the Department of Electrical Engineering, FICT, BUITEMS. My research interests are HVDC system and FACTS devices.

Dr. Abdul Muntaqim Naji

I joined BUITEMS in April 2010 as a lecturer after the completion of my B.Sc. Engineering in Geological Engineering from University of Engineering and Technology (UET), Lahore. I received my Ph.D. Degree from Hanyang University, South Korea from the Department of Civil and Environmental Engineering under the supervision of Prof. Dr. Hankyu Yoo. My Ph.D. research title was “A study on rockburst problems in deep geological and geomechanical heterogeneous environment at great depth”. During my academic journey, I have published several research articles in well-reputed journals. I am well versed in the field of Dam Engineering and Tunneling.

Presently, I am serving as a Lecturer in the Department of Geological Engineering, Faculty of Engineering and Architecture. Moreover, I am engaged in different research projects in the field of tunnelling with professors and research groups from different universities of Pakistan. I aim to share my knowledge and academic insights with my fellow researchers and students at BUITEMS.

Hafeezur Rehman

Graduated in November 2007 and obtained a BSc Mining Engineering (Honours) degree from the University of Engineering and Technology, Peshawar, Pakistan. Passed all Engineering Examinations with distinction and soon after graduation, worked in national (Government and private) and international organizations till joining BUITEMS as Lecturer in 2013. In 2015 received an HRDI-UESTPs scholarship from HEC for MS leading to Ph.D. studies and completed it from Hanyang University, South Korea in the field of Geotechnical Engineering at the Department of Civil and Environmental Engineering, in August 2020 under the kind supervision of Prof. Hankyu Yoo. During this entire study period, Prof. Hankyu Yoo has given me bundles of encouragement, patience, dedication, guidance, direction, and a working environment. This positive approach and encouraging environment helped me to think outside the box and as a result, I published some SCI papers during the PhD journey.

In my Ph.D. research, I worked on tunnel design at great depth and my Ph.D. title was “Evaluation of rock mass classification systems for tunnel support design and their extension to highly stressed jointed rock mass environment”.

Dr. Muhammad Ayub Tareen

I received my MS lead to PhD degree on August 21, 2020, I was associated with the Electrical and Electronic Engineering Department of Hanyang University, South Korea from September 2015 to August 2020 where I did my MS lead to PhD in the field of Electric Machine Design and Control under the supervision of Professor Kwon Byung-il. Currently, I am working as an in-charge Chairperson in the Department of Electronic Engineering, Faculty of Information and Communication Technology at BUITEMS. My PhD research work was on “Brushless operation of wound field synchronous machines, a permanent magnet less synchronous machine solution.”

Working in Professor Kwon's lab was a great experience and an opportunity to engage and initiate multiple research topics and collaborations. I am indebted always that he taught me about research and how to do it with his kind, innovative, and precise research attitude. I am so compelled by the opportunities he gave me during my research phase in ECSL to attend national and international conferences in the field that helped me to my current position.

Dr. Muhammad Qasim Khan

I received my PhD degree in Computer Engineering on 27th August 2020 under the guidance of Prof. Dr. Sukhan Lee from Sungkyunkwan University, South Korea. Currently, I am working as Lecturer at BUITEMS. I worked on: “Analysis of driving behaviour with driver's visual attention using the syntactic approach.”

Working in Prof. Sukhan Lee's lab was a great experience and an opportunity to engage and initiate multiple research topics and collaborations. Prof. Dr. Sukhan Lee always encouraged us to explore new fields to get a broader perspective and bring together new ideas and methods to solve interesting problems. I feel that this freedom and creativity to think outside the box have bettered me as a researcher and helped to prepare me for my current position.

BUITEMS CPEC Center

Establishment of CPEC Center of Excellence (CCE) BUITEMS

On August 5, 2018, Governor Balochistan / Chancellor BUITEMS, Muhammad Khan Achakzai inaugurated the China Pakistan Economic Corridor (CPEC) Centre of Excellence at Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS). Deputy Secretary-General of the China Foundation of Peace and Development Mr. Wang Hua was present on the occasion. CPEC Center of Excellence BUITEMS is funded by the China Foundation for Peace and Development (CFPD) and housed at BUITEMS Quetta. The facility has a covered area of 17,540 square feet and contains an exhibition hall, auditorium (150 pax. capacity), multipurpose hall, two lecture hall, test hall, library and ten offices.

Activities of CPEC Center of Excellence (CCE) BUITEMS

CPEC Center of Excellence BUITEMS had successfully conducted the following activities/ events in the first year since its foundation,

Chinese Language Basic Course

02 batches of Chinese Language Basic Course (Level-I) have been completed with 45 and 42 students. The course emphasizes speaking, listening, writing and reading skills along with 400 Chinese language characters.

The same and further advanced courses are anticipated in the coming days for the students (from BUITEMS and other educational institutions). CCE is also planning to arrange the executive classes for the employed and business community.

CPEC Related Research

A Memorandum of Understanding (MOU) was signed between BUITEMS, Quetta and CPEC-COE, Islamabad concerning collaboration on CPEC related projects and research, especially about Balochistan and conducted a survey/data collection on labour participation

Research Project on "Topological Atlas, Mapping Contemporary"

CPEC Center of Excellence BUITEMS and Department of International Relations are working on a research project titled, "Topological Atlas, Mapping Contemporary". CPEC CCE BUITEMS will assist the Project, "Bordescape Methodology" in Pakistan, with the following tasks,

I. Lead on recruitment and semi-structured interviews.

II. Assist with the organization and recruitment of participants for two workshops with migrants.

III. Assist with identifying ten legal cases relating to crossing the Iran-Pakistan border for analysis.

IV. Provide timesheets of time spent on the project and receipts for all expenses.

Founding Membership

CPEC Center of Excellence BUITEMS is the founding member of the South and South-East Asian Universities Consortium established at Yunan University, China. Apart from this, the CPEC Center of Excellence BUITEMS is also the founding member of the Consortium of Pakistan-China Universities. Two sessions have been attended by the later consortium.

Conferences /Talks / Dialogues

CPEC Center of Excellence BUITEMS in collaboration of Information Department, Government of Balochistan has conducted a Peace Film Conference with the details as followed,

S#	Theme	Chair	Panellists
1	INTER-PROVINCIAL DIALOGUE ON FILM AND CULTURE	**Mr. Abdul Khaliq Hazara** Minister of Culture, Tourism and Archive - Government of Balochistan	1. Dr. Shah M.Marri 2. Zafar Mairaj 3. Yasir Pirzada 4. Afzal Murad 5. Dr. Adnan Rafique 6. Shakila Haider 7. Wussat Ullah Khan
2	CONTEMPORARY CINEMA IN BALOCHISTAN: LESSONS LEARNED AND WAY FORWARD	**Mr. Hashim Nadeem** Secretary of Information Department - Government of Balochistan	1. Hameed Shiekh 2. Dr. Khalil Ahmed 3. Abdullah Badini 4. Ayub khoso 5. Rehana Latif 6. Shahzad Rafiq 7. Izhar Ul Haq 8. Farooq Sarwar
3	FINANCING FILM PROJECTS: CASE STUDIES	**Mr. Zahoor Buledi** Minister of Information - Government of Balochistan	1. Parisa Gorgin (Iran) 2. Prof. Nenad (Bosnia) 3. Masoud Sohieli (Iran) 4. Fatimah Hussaini (Afghanistan) 5. Parisa Gorgin (Iran) 6. Hashim Nadeem (Pakistan)

Besides talks/ dialogues, the CPEC Center of Excellence BUITEMS, Information Department, Government of Balochistan and Asia Peace film festival has conducted a unique program on Film Making. Filmmakers from Pakistan, Afghanistan, Turkey, Singapore, Iran and Lebanon participated in the event. Short films and animations were also displayed at the event. In the end, a very healthy discussion carried on between the filmmakers and the audience. The details of the event are as followed,

S#	Title	Category	Director	Country	Duration
01	The Blind Of The Cathedral	Short Film	Nadine Asmar	Lebanon	17:35
02	Mary Mother	Short Film	Sadam Wahidi	Afghanistan	19:20
03	Khwaab	Animation	Waseem Awaz	Pakistan	05:43
04	The Vacant Closet	Short Film	Davoud Jalili	Iran	01:36
05	Golden Egg	Animation	Srinivas Bhakta	Singapore	08:20
06	Playing House	Animation	Ozgulgurbuz & Cenk Koksal	Turkey	03:21
07	Maen Kon Hoon	Short Film	Faizan Ali	Pakistan	12:08
08	Con	Short Film	Muneeb Zaidi	Pakistan	18:00
09	Gawadar	Short Film	Shabir Anees	Pakistan	01:00
10	Loralai-Hidden Harmonic Treasure	Short Film	Naqeeb Khan	Pakistan	12:24

Biosafety Awareness Workshop by Department of Microbiology

CPEC Center of Excellence BUITEMS and the department of Microbiology, BUITEMS organized three days Biosafety Awareness workshop in BUITEMS in collaboration with the Pakistan Biological Safety Association and National Institute of Health, USA. This training aimed to teach the basic principles of biosafety to the individuals belonging to the biological background and was also involved in conducting research practical in different laboratories.

A large number of participants including teachers and students from BUITEMS, SBK Women's University, University of Balochistan and CASVAB (Center of Advanced Studies in Vaccinology and Biotechnology) actively participated in the workshop. The workshop was facilitated by the PBSA team who flew from Islamabad. The demonstration was given by the instructors of PBSA from the Quetta Chapter.

International Conference on Computing, Electronic, and Electrical Engineering at BUITEMS, Quetta (ICE Cube 2018)

ICE Cube is a biennial conference series conducted by CPEC Center of Excellence BUITEMS Faculty of ICT, BUITEMS in technical collaboration with the Institute of Electrical and Electronics Engineers (IEEE). ICE Cube signifies the gathering of researchers and professionals who are excited about ground-breaking technologies in the field of computing, electronic and electrical engineering.

in this regard, The 2nd international conference on Computing, Electronics and Electrical Engineering (ICE CUBE 2018) was organized on November 12-13, 2018 at BUITEMS, Quetta, jointly supported by IEEE (Institute of Electronics and Electrical engineering), HEC, BUITEMS, NIC Quetta, Fulbright, Haier, PSF, ECOSF A & J Def Tek consultants and Huawei, Google, Asian council of science editors (ACSE), and

Digital Films. More than 100 researchers, and 3 keynote speakers and 8 distinguished speakers presented their work to more than 500 participants in the conference. Prof. Dr. Jin Huang from the University of Tsinghua, China also participated as the Keynote Speaker. The conference also consisted of three tutorial sessions. This time, 138 full technical papers were submitted to the conference by researchers from different countries where 42 high-quality papers were selected for presentation. The conference started with a welcome note by Vice Chancellor BUITEMS, Followed by different sessions in various halls. In the closing ceremony, the Conference General Chair Mr. Ahmed Farooq Bazai thanked all guests and appreciated the efforts of the organizing committees. Finally, the Chief Guest, the Chief Secretary of Baluchistan Dr. Akhtar Nazir, shared his views about the conference and also emphasized the need for measures for the development of Balochistan.

Future Plans & Challenges of CPEC Center of Excellence (CCE) BUITEMS

CPEC Center of Excellence BUITEMS had successfully conducted the following activities/ events in the first year since its foundation,

CPEC Center of Excellence BUITEMS, since its inception, has been striving for full functionality in the field of Industrial and Vocational training and coping with the un-availability of Chinese language instructors. However, CPEC COE BUITEMS has been busy in linkages development for the purpose.

For Chinese Language teachers, the CPEC Center of Excellence BUITEMS has initiated the summary to the authorities for the approval of requesting Volunteer Chinese Language teachers from the Hanban /Confucius Institute Headquarter. It is anticipated with great hope that after having Volunteered, the language program would fulfil the need of the time.

CPEC Center of Excellence BUITEMS is also planning for the HSK testing Center to be established in Balochistan, so that the locals of the province may not travel to other cities/province for the purpose.

For Industrial and Vocational training, CPEC Center of Excellence BUITEMS is collaborating with the CPEC related Government line departments, NGOs and i-NGOs for the establishment of the vocational training labs.

CPEC Center of Excellence BUITEMS is planning to bid for the Selection/ Qualification of TVET interventions with the Balochistan Rural Support Programme. In which, CPEC Center of Excellence BUITEMS will be conducting technical vocational & educational training to more than two thousand men/women of seven districts of Balochistan (i.e.: Zhob, Loralai, Pishin, Killa Abdullah, Khuzdar, Jhal Magsi & Washuk).

It would be highly appreciated, if CFPD may intervene in the establishment of vocational training labs in CPEC CCE BUITEMS and develop linkages of CPEC CCE BUITEMS with such institutions for the establishment of vocational training labs.

International Centre for Refugees and Migration Studies (ICRMS) BUITEMS

ICRMS was established in 2017 with the support of UNHCR. The center is a dedicated research and policy institute located at BUITEMS, a premier academic institution in Balochistan. BUITEMS in partnership with UNHCR seeks to build on each other strength a resource base for knowledge and expertise on the issues related to forced migration in the region. The center focuses on the issues related to migration and displacement. The center engages in the activities of capacity building of the Afghan refugee population, research, awareness through public lectures on issues related to refugees and displacement. The purpose of the center is to address some of the major challenges that Refugees face in Pakistan, including identity-crisis, opportunities for tertiary and vocational education, social intolerance and want for capacity building. The vision of ICRMS is congruous with UNHCR works and priorities that include safety and protection, access to educational services. The center also encourages policy dialogue on issues related to the protection of refugees and promoting social cohesion between refugees and host communities. The research institute serves as the repository of information on issues related to

refugees and migration and analyses' and disseminate that information to wider audiences. This is achieved through research work on the subject of refugee issues, periodic public talks, and capacity building activities for the refugee population.

Vulnerable Populations and Pandemics: Refugees and Infectious Diseases

(First Public Lecture)

The first public lecture of the series on “Vulnerable Populations and Pandemics: Refugees and Infectious Diseases” was held by International Centre for Refugees and Migration Studies. The lecture was delivered online by Dr. Ayaz Qureshi on 2nd October 2020 at the venue of BUITEMS. The speaker highlighted the impact of the prevalent health crisis on the public healthcare situation of refugees. The session specifically spotlighted the vulnerabilities faced by Afghan refugees during the Covid-19 pandemic in Pakistan. The relevance of policy guidelines in the health sector for the refugee population was also emphasised. Dr. Arif Azad is a medical doctor with a specialization in public health and public policy. He has worked with several INGOs, UN agencies, and donors including DFID, UNDP, OXFAM on issues related to health.

The lecture was moderated by Hammal Aslam, Director ICRMS. The drastic effects of current humanitarian crises on the low-income countries which were already having a weak healthcare system were underscored.

Mr. Arif Azad aptly added that “COVID-19's disease burden is higher in low-income settings such as resettled refugee populations due to living conditions, comorbidities, high-risk jobs, and delayed care and public health measures”. The talk was concluded with the question and answer session. In the end, Mr. Azad suggested that refugees are the ones who are disproportionately affected by COVID-19 due to the frequency of unemployment, stigma about disease transmission and a weak healthcare system, therefore their issues need to be addressed.

Climate Migrants: Fact or Fiction

(Second Public Lecture)

The second lecture of the series was presented online on the issue of " Climate Migrants: Fact or Fiction" by Professor Danish Mustafa on October 20, 2020, at BUITEMS. Dr. Danish is a faculty member at the department of geography at King's College London. He was also affiliated with George Mason University and the University of South Florida in the past. Additionally, he has worked extensively on the issues related to environmental change and its effects on the social world.

Dr. Danish is also the lead author for the United Nation Development Program and co-author of Pakistan five year flood response strategy. Moreover, he has executed policy-related research work for various international organizations including DFID, USIP, and IOM to name a few. His lecture underscored the matter of climate-induced migration and displacement in the circumstantial realities of Balochistan. He also concentrated on the Karez System's influence on causing migration and influencing the climate. The migration and displacement brought by climate change in Balochistan were deliberated within prevailing international backgrounds and national policies by stressing the vital link between climate change influence on the frequency and intensity of extreme climate events, environmental degradation, and human mobility.

'Refugee': What's in the name?

(Third Public Lecture)

The last lecture of the series was on 'Refugee': What's in the name?” which was delivered online by Dr. Ayaz Qureshi on 18th November 2020. The lecture focused on the multifaceted explanation and interpretation of the term 'refugee'.

Dr. Ayaz Qureshi is serving in the school of Social & Political Sciences, University of Edinburgh (UOE), UK. He has recently initiated a health and migration research network at UOE. Moreover, he is also the program director for MSc medical Anthropology over there. In terms of research and scholarly work, he has recently published a monograph on the spread of HIV

in Pakistan. His book is titled "AIDS in Pakistan: Bureaucracy, Public Goods and NGOs".

The said webinar was started with the explanation of the term "refugee" and "immigration" as a phenomenon in the political, social, cultural, and economic context. In the second half of the lecture, the evolution of refugee rights and the relevance of the 1951 Refugee Convention and its 1967 Protocol was discussed. The session ended by taking questions from the audience. The session established to be an appealing session that allowed critical debate by involving university students.

The evolution of refugee rights and the relevance of the 1951 Refugee Convention and its 1967 Protocol was discussed in the second half of the lecture. The session concluded by taking questions from the audiences. The session proved to be an engaging session that allowed critical debate by involving students.

Media Literacy Training Report

The six day-long Media Literacy Training for Afghan refugee youth started on 21st September and continued till 28th September 2020. The training was held in Training Hall, BUITEMS. Media literacy training was given by the Faculty Department of Mass Communication of BUITEMS.

The first two days of training was delivered by Mr. Iftikhar Ahmed Baloch, Chairman Department of Mass Communication which was about basic concepts of media, different mediums of information, news report title writing. The interactive session allowed students to share their problems and methods of information generation and dissemination.

The fifth and sixth day of training was delivered by Mr. Homer Jan, Lecturer Faculty of Mass Communication. The last two days of training was about sources of news and information, the difference between disinformation and misinformation, fake news. On the last day of training, the trainer reviewed the work presented by the groups. Groups presented videos by using the editing video software and learning of whole training.

The last day of training concluded with the closing ceremony which was attended by Pro VC BUITEMS, Dr. Faisal Ahmed Khan, Mr. Haider Zaman(UNHCR Representative), Ms. Humera Karim(UNHCR), Deans of Faculty of Arts and Basic Sciences and Faculty of Information and Communication Technology, trainers for computer and media literacy training. The ceremony started with the opening remarks by Director ICRMS, Mr. Hammal Aslam, he thanked trainers and trainees for making training successful and also motivated Afghan Refugee youth to start writing about their issues by using skills learned through the training.

Pro VC, BUITEMS Faisal Ahmed Khan addressed the Afghan Refugee youth and deliberated upon the cooperation of BUITEMS to address the issues of Afghan Refugee Youth. Pro VC distributed shields and certificates among trainers and participants.

Computer Training Report

International Center for Refugees and Migration Studies (ICRMS) organized Computer Training for Afghan Refugee Youth from 7th to 18th September at HBL Computer Lab, BUITEMS. The training was attended by twenty Afghan refugee youth from different academic, backgrounds and localities in Balochistan. As this training was conducted during the pandemic, therefore, all the SOPs were followed. The ten-day-long computer training manual was created in a way that allowed the learning of refugee youth at the same level.

The ten-day-long computer training was delivered by faculty members of computer engineering including Engr. Akram Khan, Dr. M. Ashraf, Dr. Bakhtiar Kasi, Dr. Jan M. and Dr. M. Nadeem. The training was facilitated by three volunteers who assisted participants individually to smoothly run the session and making content understandable. The ten days long computer training was about MS. Word, PowerPoint and Excel processing. The training also included a session on Urdu typing, formal email writing format, graphic designing. The participants were also given a session on the use of social media like YouTube to blogging. The participants were also briefed about cybersecurity and issues related to it.

Round Two of Computer Training Report

ICRMS arranged ten days long Computer course for Afghan refugee youth for the second batch. Refugee youth was trained by the faculty members of the Department of Information and Communication Technology of BUITEMS.

The students were introduced to the basic operation and functions of the computer. Moreover, the course was designed in a way that helped them to understand the preliminary use of technology for better advocacy of refugee issues.

Round Two of Media Training

ICRMS arranged six day-long Media Training for Afghan Refugee youth for the second Batch. The training was intended to impart basic citizen journalism skills among Afghan refugee youth that enables them to utilize the resources at their disposal to share their issues effectively. The first two training was delivered by VOA Pashto Video Journalist, Mr. Hafeezullah Shirani. He focused on headline-making, report making and investigation method, reporting language and ethics. Moreover, he also practically taught participants about types of shot, making report, frame-making and interviewing skills. Students were divided into groups and each group was assisted by a Media student to develop a report in veracity on any issue and topic. At the end of two days session, students presented their work on screen.

The third and fourth day of training was delivered by Mr. Tariq Mehmood Khatak, Assistant Professor at the Department of Mass Communication. He taught participants about editing skills, investigation, interview and publication methodologies. Furthermore, the dos and don'ts of citizen journalism were also discussed.

The last two days of training was delivered Mr. Nouman Khan, from the Department of Mass Communication. He focused on the relevance of citizen journalism in highlighting the unheard, unreported issues faced by the Afghan refugee population. The participants were also briefed about the effective use of social media, blogging for raising voice for the refugee crisis. The training was concluded by awarding the trainers, assistant and participants of Computer Training and Media Training with shields and certificates. Moreover, the reports prepared by participants displayed and reviewed by the trainers.

Policy Dialogue on Access to Vocational and Tertiary Education to Afghan Refugee Students

ICRMS-BUITEMS in collaboration with UNHCR conducted policy dialogue on the issue of access of Afghan refugee students to vocational and tertiary education. The dialogue specifically focused on current opportunities available to Afghan refugees and issues faced by them while accessing higher education and vocational training in Pakistan.

The participants of the dialogue included representatives from related and relevant organizations and institutions that directly deals with the issue of higher education of Afghan refugee students. Participants included representatives from UNHCR, HEC, Comissionarate of Afghan Refugees, Afghan Consulate, Education Experts and Afghan Refugee Students, Representatives from UOB, SBK, BUTEK, UOL, and BUITEMS. The dialogue was moderated by Mr. Hammal Aslam, Director ICRMS.

At the end of the dialogue, the forum pointed out points of intervention and proposed policy guideline for the future. The consultative dialogue highlighted quota Allocation, Scholarships and Documentation for Afghan Refugees in Balochistan, problems faced by Afghan Refugee Students while accessing Vocational and Tertiary Education, Women Education, Financial Constraints, Transition towards Pakistani Curriculum and proposed solutions in this backdrop. Afghan refugee Students representative, Saadudin put forth the problems faced by refugee students and possible solution to them. The recommendations proposed

after deliberation included: follow up sessions of policy dialogue, expansion of the scope of the dialogue, inclusion and representation from Planning Commission and SAFRON Ministry, budget allocation for the higher education of Afghan refugee students, simplifying the procedure of issuance of equivalence certificate, conduction of baseline study regarding access of refugee population to higher education, documentation/registration of Afghan refugee population, quota allocation and refugee students placement in Pakistan degree-awarding institutions, the establishment of schools at refugee populated areas providing free and affordable education. The dialogue concluded with unanimously agreeing on working for making technical and higher education accessible to the refugee population.

Directorate of Sports

Meeting of HEC Commencement of Intervarsity Competitions 2020-21

On October 09, 2020, the meeting of director Sports of zone-I institutions was held at the Higher Education Commission, Regional Centre, Quetta. This meeting witnessed the presence of the directors of sports from all the Universities of Balochistan. On behalf of the BUITEMS, Mr. Masood Ahmed Kasi, deputy director was present in the meeting. It was decided and unanimously agreed upon in the meeting that the following games are allotted to each institution for organizing the event.

S.No	Game Allotted	Name of Higher Education Institution
1.	Hockey	University of Baluchistan, Quetta
2.	Cricket	University of Baluchistan, Quetta.
3.	Volleyball	Lasbela University of Agriculture, Water & Marine Sciences, Lasbela
4.	Football	Baluchistan University of Engineering & Technology, Khuzdar
5.	Basketball	Baluchistan University of Information Technology & Management Sciences, Quetta
6.	Table Tennis	Al-Hamad Islamic University, Quetta
7.	Badminton	Bolan University of Medical & Health Sciences, Quetta

HEC Intervarsity Zone I & Final Round.

Training camps of the above-mentioned events are continued of BUITEMS Students, for HEC Intervarsity Zone I & Final Round.

All Quetta Mr. Quetta Model Physique Championship 2020-21

All Balochistan Mr. Quetta Model Physique Championship was held at Quetta on 06-11-2020, Mr. Syed Bilal student of BS-English BUITEMS participated in the event and won the First Position.

Selection Trails for HEC Men Football Team

It is a matter of great pride for BUITEMS that two of its sports officers are being selected from all over universities in Pakistan. The details tell that Mr. Masood Ahmed Kasi, Deputy Director of sports and Mr. Akthar Mouhidin, Sports Mentor BUITEMS are selected for the selection committee HEC Football Men team at the University of Veterinary and Animal Sciences, Lahore.

Directorate of Quality Enhancement & Accreditation (DoQE&A)

Message from Director QE&A

BUITEMS is a world-class university committed to providing quality education to the students of Balouchistan. Quality Assurance has become a defining feature of higher education in the last few decades. BUITMS accords a high priority to quality assurance in all its work. The Directorate of QE&A implements and ensures quality across the university. Its work is matched by the steps that have been taken in academic and administrative departments to ensure that the highest quality of learning, teaching, curricula, research, and the academic pursuit of knowledge is maximized. The university has a well-defined system to take feedback from internal and external stakeholders to improve the teaching skills and curriculum. Another achievement of BUITEMS is shifting from the normal accreditation process to outcome Based Education (OBE) in engineering programs that have synchronized the University degrees with International standards. We are also focusing on academia-industrial linkages to synergize academic activities with Government and industry to provide a knowledge-based economy. The three guiding principles of QE&A are efficiency, capacity building, and quality. These standards are achieved by the cooperation of all the collaborators, including the students and faculty following the guideline of HEC. We at this stage hope that QE&A will play an important role in the betterment and the achievement of academic quality and standards in the time to come.

Strategic Highlights

With the evolution in global educational standards, the focus on the quality of education has tremendously increased. University education is more focused on personality building, knowledge base, and practical abilities of graduates, contrary to the past era of providing them with degrees as entry tickets to attain jobs. Enhancement of the quality of education has become more critical for any nation of the world and a depiction of growth. Moreover, aspiring to higher standards of educational quality is no longer a luxury. Quality assurance for universities can be briefly described as a continuous self-assessment process, by seeking internal and sometimes external validation or accreditation. This process ensures the effective alternative of the pre-determined requirement of educational quality by an institution or program of study.

Vision

The Directorate of Quality Enhancement & Accreditation aims at uplifting the quality of education and harmonizing standards of the degree of the universities with the international standards through the development of a sustainable mechanism of Quality Assurance to meet the dire challenge of transforming the Provincial status into a knowledge economy.

Mission

Our mission is to strive for means and ways to improve the quality of education at the university and bring it to par with the level of top-class universities in the world.

Institutional Performance Evaluation IPE in BUITEMS:

Continuous improvement in the quality of education is the goal of BUITMS. Following the footsteps of the Higher Education Commission (HEC) for achieving excellence in academia and research the university is striving hard to meet the international standards. HEC has taken a significant initiative of performance-based Institutional recognition to evaluate the performance of the institution. Furthermore, the initiation of the primary step of outlining the Performance Evaluation Standards for the Universities has been done. They focused on eleven well-defined standards.

Standard 1: Mission Statement and Goals

Standard 2: Planning and Evaluation

Standard 3: Organization and Governance

Standard 4: Integrity

Standard 5: Faculty

Standard 6: Students

Standard 7: Institutional Resources

Standard 8: Academic Programs and Curricula

Standard 9: Public Disclosure & Transparency

The Directorate of Quality Enhancement and Accreditation is conducting the Self-Institutional Performance Review for the current year on the above standards. This exercise is performed taking into

account the three parameters comprising:

(i) Review of the University Portfolio Report UPR and annexed information/data

(ii) Interactions with the administration, faculty, and students

(iii) Visit the facilities

The Directorate of Quality Enhancement and Accreditation, assign the internal and external members from BUITEMS, as Review Panel. The panel members assume the evaluating role, bringing the latest relevant experience in higher education and teaching, professional practices, and their relevance to national goals. The action plan for further improvement is the final step of this process.

Self -Assessment Process of Academic Programs at BUITEMS

The Directorate of Quality Enhancement & Accreditation (QE&A), Balochistan University of Information Technology, Engineering & Management Sciences (BUITEMS) has conducted the Self Assessment (SA) process under the supervision of Director Quality, Syed Dara Shikoh Amir, in all the campuses (Takatu, City, Zhob) comprising 64 departments. The process was started on August 13, 2020, and the first visit was made by the assessment team on December 8, 2020. The (SA) cycle consisted of visits, findings, recommendations, implementation plan, and follow-up. Self-Assessment (SA) is a systematic procedure introduced by HEC for gathering, reviewing, and using important quantitative and qualitative data and information from multiple and diverse sources about educational programs, to improve student learning, and evaluate whether academic and learning standards are being met. The process is based on the following criterion:

Criterion 1: Program mission, objectives, and outcome

Criterion 2: Curriculum design and organization

Criterion 3: Laboratories and computing facilities

Criterion 4: Student support and advising

Criterion 5: Process control

Criterion 6: Faculty

Criterion 7: Institutional facilities

Criterion 8: Institutional support

Global Linkages

Accreditation

Accreditation at BUITEMS is an organized process based on well-established principles. The main purpose of this is the improvement of academic quality and public accountability. This ongoing process occurs normally every year.

Accreditation is not limited to

- Verifying that an institution or program has met established standards.
- Assisting prospective students in identifying acceptable institutions.
- Protecting an institution against harmful internal and external pressures.
- Creating goals for self-improvement of weaker programs and stimulating a general raising of standards.
- Involving the faculty and staff systematically in situational evaluation and planning.
- Establishing criteria for professional certification.

Accreditation at BUITEMS

- All our Engineering programs by the Pakistan Engineering Council (PEC)

a) Civil Engineering
b) Geological Engineering
c) Chemical Engineering
d) P&G Engineering
e) Mining Engineering
f) Mechanical Engineering
g) Textile Engineering
h) Computer Engineering
i) Electrical Engineering
j) Electronic Engineering
k) Software Engineering
l) Telecom Engineering

- Architecture program by the Pakistan Council of Architects and Town Planners (PCATP)

  a) Bachelor of Architecture

- All our Computer Science and Information Technology programs by the National Computing Education Accreditation Council (NCEAC)

  a) BS (Computer Science)

  b) BS (Information Technology)

- All our Management Sciences programs by the National Business Education Accreditation Council (NBEAC)

  a) Bachelor of Business Administration

  b) Bachelor of Business Studies

  c) Master of Business Administration

- An education program by the National Accreditation Council for Teacher Education (NACTE)

  a) BS (Education)

ISO 9001-2015

BUITEMS is ISO 9001-2015 accredited by TUV AUSTRIA. In 2019 BUITEMS emphases on ISO 9001-2015 changed revised standards towards where we are now? Who we are? What do we do? And what our stakeholders (students, their parents, their employers, and society at large) think about us?

In BUITEMS the leaders and top management actively demonstrate that they care and are involved in quality from the development of policies to definitions of roles and responsibilities. With ISO, our plans demonstrate and give stakeholders confidence that our quality management system can deliver products and services that satisfy their requirements. In our system, we, assure that all changes must also be planned and carried out in a controlled manner.

This year, we effort of ISO revision, we are more explicit and demanding of process management. We also achieve great results and we will sail through any assessment.

This year we also developed implement processes for successfully communicating with our stakeholders, to providing them with information receiving feedback for continuous quality improvement.

We believe that ISO 9001-2015 is the catalyst that is driving more leaders and making spectacular gains at BUITEMS this year.

BUITEMS Financial Review

Financial Highlights

To ensure that the University continues to grow and remain competitive, a plan was initiated to boost up revenue generation. The statutory bodies appreciated the proposal for sorting the ways and means to replenish financial resources to cater to the financial needs. As the University is expanding, its appropriated strategic investment is increasing. Therefore, the University's cash investment/ non-current investments have been increasing. The University has generated funds to enable it to initiate new academic programs, technological development, maintenance of infrastructure and increasing building capacity

Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS), Quetta has been imparting quality education since 2002 in the fields of Engineering and Emerging Sciences. BUITEMS is in its development phase and at this stage, the proper funding both, Development and Recurring are crucial for its growth, development and imparting quality education.

Annual Budget for the Financial Year 2020-21 was approved to the tune of Rs.1,703.699 million, which was revised to Rs.1,567.500 million. The receipt of the University during the year 2019-20 was Rs.238.269 million, which decreased to Rs.167.00 million during 2020-21, owing to COVID-19 Pandemic

Summary Revised Budget 2020-2021		
Pay & Allowances	**Approved Budget**	**Revised Budget**
Total Pay & Allowances	**1,334.333**	**1,198.009**
Operational Expenditure		
Purchase of Durable Goods	40.000	26.000
Purchase of Consumable	36.450	31.500
Goods Communication	4.000	3.601
Civil Works-Building & Structure.	4.000	3.701
Repair & Maintenance	32.350	26.450
Utilities	81.870	90.961
Rent, Rate, Taxes & Fee	9.280	10.930
Training & Research	7.010	38.901
Other Expenditure on Commodities & Services	154.406	137.447
Total Operational Expenditure	**369.366**	**369.491**
Total Revised Budget 2019-20	**1,703.699**	**1,567.500**

Implementation of Enterprise Resource Planning (ERP) in BUITEMS

BUITEMS has always been focused on keeping up with adopting the latest trends/processes, be it in the form of ISO Certification, Outcome-based Education (OBE) or implementation of ERP. Enterprise Resource Planning (ERP) is the backbone of every organization's Finance and overall operations. In this era, when many processes are going towards automation, Accounting, Budgeting, Human Resource Management, Procurement Processes, Inventory Management and Asset Management are also being managed through automation. BUITEMS believes in maintaining a clean atmosphere, in this regard, BUITEMS has transitioned towards Microsoft Office Dynamics 365.

BUITEMS, with the support of its management, started working towards the implementation of ERP in BUITEMS in March 2019. BUITEMS acquired licenses from Microsoft Corporation, under the umbrella of the Higher Education Commission (HEC), for Microsoft Dynamics 365.

Microsoft Dynamics 365 covers the following modules:

- Payroll Management
- Human Resource Management
- Procurement
- Inventory Management
- Assets Management
- Accounts Payable
- Accounts Receivable
- Budgeting
- Employee Self-Service

Under MSD-365, all the processes/operations are run through the system, which is the first step towards Paperless Environment in BUITEMS. All purchase requisitions, purchase orders, invoices, and payments are generated/ processed through Microsoft Dynamics 365. BUITEMS was issued licenses of Office 365 for complete Faculty, Administration, and students. During the pandemic, when many universities were struggling for online official accounts/classes, BUITEMS had Microsoft Teams with official licenses. All faculty members and

students were issued licenses of Office 365. Currently, when the world is still facing COVID-19 issues, over 9000 students are using BUITEMS online services of Office 365, which includes online classes and many other apps from the Microsoft Office 365 portal.

Another important feature of BUITEMS employees is Employee Self-Service. With the help of the employee self-service portal, employees can see and generate printouts of their Pay-slips; they can apply for leaves, NOC, etc. Employee self-service has many other features which will be included over time. As mentioned earlier purchase requisition, are generated from Microsoft Dynamics 365, which has the concept of e-filing processes. Accounting procedures are now as per the standard of international accounting standards. Workflows are designed as par procedures of University processes. Likewise, this will promote timely response management of files.

An official letter from the President of Pakistan was circulated in all the universities of Pakistan regarding standardizing their accounting procedures; Fortunately BUITEMS already had started the implementation of the ERP project of Microsoft Dynamics 365. Similarly, in November 2020 higher education commission of Pakistan circulated orders to all universities of Pakistan regarding the introduction of the E-Office system, which Microsoft Dynamics 365 already has. BUITEMS, as per instruction of respective higher management is always following to opt international standards, in any perspective. With time there will be additional use of Microsoft Dynamics 365 as it is convenient and easy for us or cause of force majeure we may face ahead.

Kaleemullah Babai
Team Lead, Microsoft Dynamics 365
Abdul Qudoos
Technical Expert, Microsoft Dynamics 365

National Incubation Center (NIC) Quetta

NIC QUETTA
A PROJECT FUNDED BY IGNITE, MoITT

From innovation to impact and beyond

LUMS
A Not-for-Profit University

Ministry of Information Technology & Telecom
Government of Pakistan

Ignite

NIC Quetta

Vision

To be the hub of innovation in the region proposing innovative approaches to impact lives and raise living standards

Mission

At National Incubation Center (NIC) Quetta, we are committed to supporting the youth of Balochistan to develop sustainable and impactful startup ventures in order to create jobs, revitalize community, commercialize new technology and strengthen local and national economy

Goals

1. To promote Entrepreneurial Culture among the youth of Balochistan
2. To promote disruptive innovation to impact lives and enhance living standards
3. To commercialize innovative technology
4. To create jobs and diversify local and national economy
5. To accelerate growth of local industry clusters

Core Values

1. **Passion for Winning** (We are continuously moving forward, innovating, and improving)
2. **Teamwork** (We believe in leveraging the collective genius)
3. **Integrity** (We are honest, open, ethical, and fair)
4. **Respect and Humility** (We treat others as we would like to be treated ourselves)
5. **Customer Focus** (We put startups first)

NIC Quetta Programs

The Incubation and Acceleration Program is an intense 4-6 months long program offered at NIC Quetta to the most promising startups scouted from all across Balochistan. Only the best startups led by passionate founders pursuing a sustainable, high-growth or high-impact venture make it to the program.

Mutually agreed upon milestones are used to gauge startup development throughout the incubation/ acceleration cycle and successful ventures are showcased at an investors' summit upon graduation. The Program also offers a non-resident acceleration track for founders of existing, young companies to avail its mentoring and investment networking platform.

The Incubation and Acceleration Program offers the following to the startups:

- Up to 6 months of access to huge co-working office facility at NIC Quetta
- 24×7 utilities including power, internet and phone
- Shared access to IT and administrative infrastructure & resources
- State of the art video conferencing system
- Access to BUITEMS labs & other common access facilities
- Access to the world-class faculty at LUMS and BUITEMS
- Access to first ever to be built MakerLAB in Pakistan
- Continuous support from the world-class management of NIC Quetta
- Marketing and PR support from NIC Quetta
- Access to world-class Smart Class Room
- Regular mentoring and advice from seasoned leaders
- Access to investors at the investors' summit

NIC QUETTA INCUBATION PROCESS

NIC Quetta Incubation & Acceleration Program
(success Thus Far)

Offering access to state-of-the-art facilities and a rich knowledge base, NIC Quetta offers is a unique experience designed to promote innovation. Businesses are incubated and are exposed to workshops and trainings, marketing support, expert opinions, and access to finance. Mentorship and edification are also provided through throughout the Incubation and Acceleration process that ultimately help businesses connect to potential investors, partners and customers.

NIC Quetta Microenterprise Program
(success Thus Far)

NIC Quetta offers support to micro entrepreneurs through a flagship Microenterprise Program. The Program with its unique and contextualized curriculum, training modules and experiential learning methodology is offered in Urdu and other local languages (Pashto and Balochi) to cater the needs of microentrepreneurs of the Province.

Graduated Startups Of NIC Quetta
(since 2018)

Direct Door service is developing an online platform which will enable customers, especially households, to be provided with services at their doorsteps. The services will include carpenter services, electricity services, plumbing services and painting services.

2020

Folklore is a fashion clothing brand that strives to serve women with garments by combining both the traditional and modern clothing. The competitive advantage, contrary to existing brands which undergo mass-production, is its clothes that are dyed, screen-printed and embroidered by hand.

2020

Metal Studios creates 3D animated content. It is currently targeting corporate sector and providing them services in advertising. It also provides editing, animation and other services to different brands.

2020

Edjin is manufacturing STEM Robotics Kits in Quetta. These robotics kits help children to learn Science, Technology, Engineering, and Math in an interesting way with deeper understanding of the science and technology concepts

2020

Riders provides safe and comfy transport services to students, office workers and families for school, college, trips, events and picnics. Riders is working on providing an innovative solution whereby the guardians can keep a check on location and can receive alerts in real time.

2020

Bio D-Fuel is producing biodiesel through pilot plants that can be used as replacement for Petro-fuels. It focuses on cost effective production of biofuel which will be more efficient not only for engines but for the environment as well.

2020

Wear Afghan makes customized Afghan cultural dresses for men and women of all age groups. It is working on reducing weight of traditional dresses without distorting the looks. Wear Afghan has innovated the cultural dress industry by creating a fusion of Afghan, Pakistani and western clothing. It also offers blended cultural themes customized according to the taste of customers.

2020

KhanMart.com is an online platform where customers can order premium quality dry fruits and have them delivered at their doorstep.

2020

ISHI is running an online platform where used imported items can be traded online. Initially the startup is focusing on handbags and toys.

2020

URAAN provides training and counseling services to fresh graduates. It is a human capital development firm striving to serve graduates with skill deficiencies so that they can become best fit for the market.

2020

Plates of Flavor is making hygienic homemade snacks and bakery items and selling through an online platform. The startup has home delivery services within Quetta city. The items are hygienic, delicious and economic.

2020

Café HaalHawal is developing an amalgamation of co-working space and a café to create an artistic space. It is a unique cafe which will provide tea, coffee and food with a library and a co-working space to freelancers.

2020

Handtalk mediator has developed an application that allows seamless communication for special people with impaired vision and hearing senses. It enables the differently-abled persons to communicate more effectively.

2020

Rewind life is working to establish the first women physiotherapy center in Balochistan. The startup has female therapists who can provide services to females in Quetta. It will be treating all major pain related conditions with specific focus on spine and musculoskeletal diseases.

2020

The startup is working on breeding exotic birds with a vast variety and then sells the breed in the market.

2020

Appointee is the Doctor Appointment and Queue Management App that equips patient appointment booking and consulting doctors on internet, through App and walk-in etc. The solution lets one to manage and create appointments based on date, time, doctor's availability or according to the patient's health.

2020

Working for years to make customized designer cakes and baked items according to the demand of market and customers individually.

2020

The product is being developed to help even those who are completely paralyzed. Its movement is controlled through eye gestures and it also monitors the health of one using it.

2020

The company maintains and repairs the color of indoor, outdoor walls, roof, and doors. It provides advance paint services where people can paint their whole house, firms etc. with 10% advance payment and the rest on monthly installments. Repair and maintenance service include fixtures of walls, roofs, doors dirty spots, leakages etc.

2020

It provides crafts & interior décor services in Quetta using 3D plans, with wide variety of handmade decor items, albums, gifts and accessories, with open choice of customization and personalization.

2020

Raniya's Collection started to make crochet frocks, crochet bags, table runners, cushion covers, decorative dolls etc. Now it has added in its collection the traditional crafts of Baluchistan in a new and innovative way. It is merging crochet work with traditional embroidery of Baluchistan so that the beauty of the culture of Baluchistan is expressed.

2020

Startups Currently Inducted At NIC Quetta

13 Tech Worm

An online platform that would connect internet users with skilled workers in local market for services that people need in daily life.

14 Snack Paradise

Provides customers with quality frozen food items like spring rolls, samosas, lapiang rolls, and other snacks, with grandma recipes in Quetta.

15 Market Hunters

Developing trading robots using machine learning in the form of android and windows application helping potential customers to trade in more systematic fashion.

16 TechSniff

Provides surface cleaning services through a self - rechargeable IoT robot by connecting it with cloud for monitoring.

NIC QUETTA YEAR 2020 HIGHLIGHTS

Investors' Summit Of Cohort-2

The following 7 startups from NIC Quetta participated in the investors' summit held at NIC Lahore (LUMS) on January 25, 2020. More than 20 investors from various backgrounds including Frontier Platinum Unilever, Kasur Group, Khaleef, Kausar Group, 47-Ventures, Insitor, Cresventures, Cap Ventures, Enqlabs participated in this summit.

Outreach And Selection Of NIC Quetta Cohort-3

Preliminary Screening Interviews for Cohort-3 Induction

Preliminary screening interviews for cohort-3 induction of NIC Quetta were conducted throughout the month of January 2020. The most viable and innovative business ideas and teams were shortlisted for final pitching at the Foundation Council.

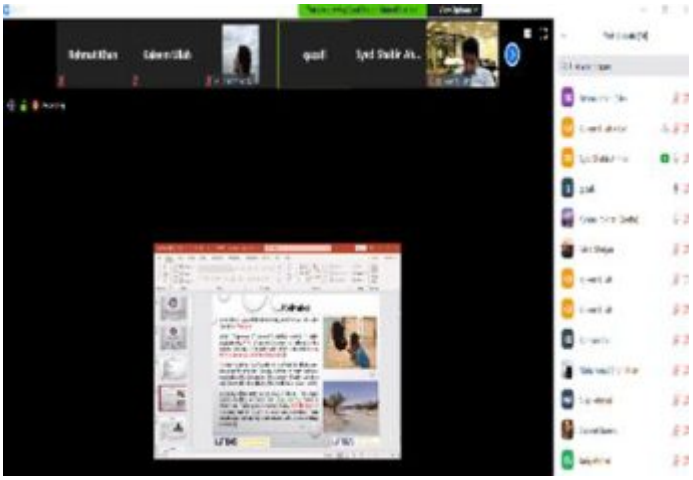
Pitch Preparation Session

Before pitching to the Foundation Council, NIC Quetta arranged a pre-pitch session on February 25, 2020 for all the shortlisted applicants of Cohort-3. Team NIC Quetta, along with other mentors, engaged with all startups and guided them on each step of their ultimate pitch preparation process.

Foundation Council for Induction of Cohort-3

Foundation Council (FC) for the induction of Cohort-3 was held digitally through Zoom (due to Covid-19 Pandemic) from April 15-17, 2020. Startups pitched their business ideas via Zoom to the honorable judges. Following judges participated in Foundation Council:

1. Mr. Faisal Sherjan
2. Dr. Tariq Ahmed
3. Mr. Kaleem Ullah
4. Dr. Muhammad Nadeem
5. Dr. Bushra Naeem
6. Mr. Babur Durrani
7. Mr. Shakeel Tareen



The FC selected the following startups for Cohort-3:

1. YKD Farms
2. Institute of Trainings and Research
3. She Bakes
4. Vakmak Lifestyles
5. Easy Tech
6. Bake O`Clock
7. Autonomous Wheelchair
8. Paint Solutions
9. Grace Crafts and Events
10. Linaleela
11. Raniya's Collection
12. Smart Atmospheric Water Generator for Drinking and Agricultural Applications
13. Addsmint
14. Smart Hydroponic System
15. Chap Lo

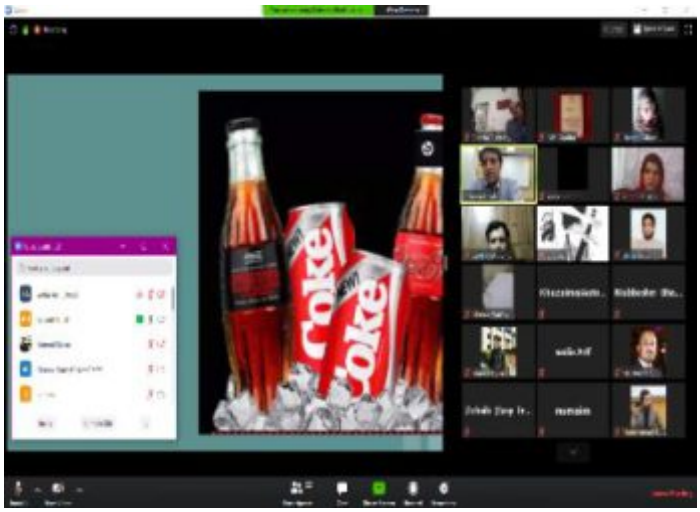
Orientation Session of Cohort-3

Orientation session of Cohort-3 was held on April 30, 2020 digitally. After a round of introductions, a detailed presentation on curriculum of NIC Quetta and other relevant information were shared with the selected startups.

Trainings And Workshops (Cohort-3)

Session On Estimating Market Size

An online session on "Estimating Market Size" was organized on May 2, 2020 for startups of Cohort-3. This session was delivered by Mr. Kaleem Ullah, Community and Outreach Manager at NIC Lahore.



Session on Product Market Fit

An online session on "Achieving Product-Market Fit" was organized for startups of Cohort-3. Following were the panelists of this session:

1. Shahid Khan (Sr. Global Director, SAP - USA)
2. Faisal Hanif (Global head of Product Management, HP Enterprise)
3. Ali Rehan (Product Manager, Keeptruckin)
4. Yaser awan (Director Labs @ Mindstorm Studios).

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Session on Growth Hacking Extending the Runway

An online session on "Growth Hacking and Extending the Runway" was organized on May 8, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Ali Samir (Former CEO TPL e-Ventures)
2. Haris Khan (Global director of Digital Marketing)
3. Javaria Khan (Head Marketing, Chughtai Labs)
4. Ahmed Muzammil (Serial entrepreneur)

Session on Marketing Strategies for Startups

An online session on "Marketing Strategies for Startups" was organized on May 9, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Qashif Effendi (CEO Reem Rice)
2. Dr. Farrah Arif (CEO EdTechWorx)
3. Salman Wasay (Co-Founder Chaaye Khana)
4. Ayesha Khan (Brand Director Nike USA)
5. Atif Sultan (Head of Marketing Pepsico Foods)

Session on Digital Marketing Strategies, Trends & Tools

An online session on "Digital Marketing, Strategies, Trends and Tools" was organized on May 9, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Usman Latif (Digital Marketing Consultant)
2. Badar Khushnood (Cofounder & VP of Growth at Fishry.com.)
3. aud bin Younis (Exec. Manager Performance Easypaisa Telenor)
4. Haris Khan (Global Digital Marketing at Careem)

Session on Ways to Increase Startup Sales

An online session on "Ways to Increase Startup Sales" was organized on May 10, 2020 for startups of Cohort-3.

Session on How COVID-19 will Impact Consumer & Market Behavior

An online session on "How COVID-19 will Impact Consumer & Market Behavior" was organized on May 11, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Yasir Riaz (CEO at YMT, Indonesia)
2. Ali Sajjad Khan (CEO, Reliance Distribution)
3. Dr Ali Madeeh Hashmi (Associate Professor of Psychiatry, King Edward Medical College)
4. Omar Abedin (Chief Marketing Officer at Graana.com)
5. Amina Rizwan (Assistant Professor, UCP)

Session on How to Write and Win Grants

An online session on "How to Write and Win Grants" was organized for startups of Cohort-3. Following were the panelists of this session:

1. Farrukh Mehboob Khan (Chief of Party USAID SMEA)
2. Sadaf Rehman (Partnership Advisor, Ex-country Director Generation Pakistan)
3. Ali Iqbal (GM Seed Fund, Ignite)
4. Omer Warraich (Founder Agrimart)
5. Kamran Niazi (Consultant USAID)
6. Hamza Habib (Grants Management Specialist, LUMS)

Session on Creativity at the Time of Corona

An online session on "Creativity at the Time of Corona" was organized for startups of Cohort-3. Following were the panelists of this session:

1. Syra Yusuf (Actress and Model)
2. Frieha Altaf (Activist & Event Producer)
3. Nabila (Stylist & Entrepreneur)
4. Deepak Perwani (Designer)
5. Tapu Javeri (Photographer)

Session on Reimagining the World After Pandemic

An online session on ""Reimaging the World after a Pandemic" was organized for startups of Cohort-3. Following were the panelists of this session:

1. Mahira Khan (Actress & UNHCR Goodwill Ambassador)
2. Adnan Malik (Actor, Director & WWF Good Will Ambassador)
3. Jibran Nasir (Lawyer & Politician)
4. Dr. Baakh (Lead Operations, Corona Field Isolation Centre, Karachi)
5. Hajra Khan (Captain of Pakistan's Women Football Team)

Session on What Angel Investors Look for in Startups

An online session on "What Angel Investors Look for in Startups" was organized for startups of Cohort-3. Following were the panelists of this session:

1. Mohammad Yusuf Jan (Angel investor, Co-founder & President at TRAFiX)
2. Omar Shah (Founder & CEO at Colabs)
3. Adam Mohayudin (Director at Khaleef Technologies)
4. Murtaza Zaidi (CEO of INER-Z Automotive)
5. Bilal Amjad (Founder InstaCare)

Session on How to Pitch to a VC Firm?

An online session on "How to Pitch to a VC Firm?" was organized on May 13, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Ali Mukhtar (CEO, Fatima Gobi Ventures)
2. Misbah Naqvi (Partner at i2i Ventures)
3. Aatif Awan (Founder & Managing Partner at Indus Valley Capital)
4. Rabeel Warriach (Founder & CEO at Sarmayacar)
5. Meenah Tariq (Partner at Karavan, Ex Head of Strategy at Invest2Innovate)
6. Omar Shah (Founder & CEO at Colabs)
7. Ali Samir Oosman (Director at Jaffam Management Consultancy)
8. Faisal Aftab (Managing Partners at Lakson Venture Capital)
9. Khurram Zafar (CEO 47-Venture)

Session on How Startups Can Make Strategic Partnerships?

An online session on "How Startups Can Make Strategic Partnerships?" was organized on May 14, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Favad Soomro (Director at Engro Foundation)
2. Maryam Arshad (Founder & Director at Impact Dynamics)
3. Ghalia Naseer (Head of Forums & Engagements)
4. Dawood (Hercules Corporation)

Session on How to Build Narrative and Startup Brand

An online session on "How to Build Narrative & Startup Brand" was organized on May 15, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Junaid Aziz (Director Brand development at Montres Journe America)
2. Ayesha Khan (Brand Director in Nike USA)
3. Umar Qamar (Founder of Export Leftovers (ELO))
4. Syed Talaal Burny (Developer Relations Manager, Careem)
5. Umer Hussain (Founder Sweet Tooth)

Session on Content Marketing - Storytelling That Moves People

An online session on "Content Marketing - Storytelling that Moves People" was organized on May 15, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Zara Shahjahan (Designer and Entrepreneur)
2. Junaid Aziz (Ex. Brand Manager Rolex, Faculty at Stanford University)
3. Asad ul Haq who (Creative Director)
4. Wahab Ghaznavi (Adjunct Lecturer/Digital Marketing, New York University)

Session on Why Bad User Experience Can Destroy Your Startup

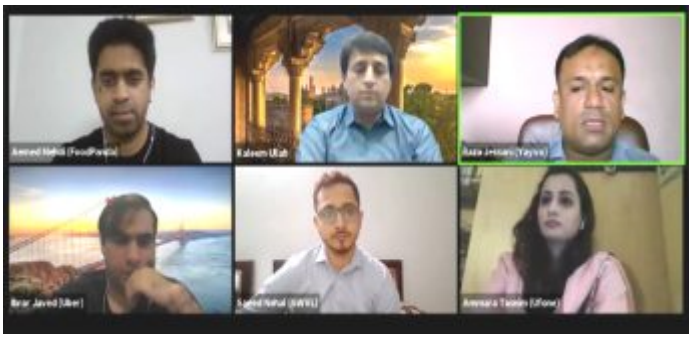
An online session on "Why Bad User Experience Can Destroy Your Startup" was organized on May 18, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Shahid Khan (Senior Global Director of SAP, USA)
2. Khushnood Qadir (Product Design Manager at Facebook)
3. Muneeb Ali (CEO, OneByte)
4. Kashif Murtaza Malik (Head Customer Experience Design & Usability at Jazz)

Session on How to Acquire, Retain & Grow Customers?

An online session on "How to Acquire, Retain, and Grow Customers" was organized on May 19, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Aemad Mehdi (Director Operations in Foodpanda).
2. Ibrar Javed (Head of Customer Experience in Uber)
3. Mohammad Raza (Head of Customer Experience in Yayvo.com.)
4. Saeed Nehal (Country Head of Experience in Swv)
5. Ammara Tasnim (Head of Customer Experience in Ufone)



Session on Learning from Emerging Startups & Resilient Founders

An online session on "Learning from Emerging Startups & Resilient Founders" was organized on May 19, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Bilal Amjad (Instacare)
2. Jahangir Ahmad (BERA)
3. Dr. Sarah Qureshi (Aero Engine Craft)
4. Ali Gul (Gul Technology)
5. Dr. Farrah Arif (EDTechWorx)
6. Anis Shiekh (baseH)
7. Abdullah Afzal (RADA)
8. Hira Irshad (APRUS)
9. Ammar Ali (Nearpeer)
10. Imran Saeed (Encore Pay)
11. Faaiz Arbab (AYECo)

Session on Leadership and Habits of Highly Successful Founders

An online session on "Leadership and Habits of Highly Successful Founders" was organized on May 20, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Mudassir Sheikha (Co-founder & CEO at Careem)
2. Imran Ali Khan (CEO & Co-Founder at Zameen.com)
3. Zeeshan Ali Khan (Co-Founder at EMPG, Zameen.com)
4. Rehan Jalil (President & CEO at SECURITI.ai)

Session on 8 Habits of Highly Effective Founders

An online session on "8 Habits of Highly Effective Founders" was organized on May 20, 2020 for startups of Cohort-3. Following were the panelists of this session

1. Umair Khan (Chairman at Folio3 / Visiting Professor at UC Berkeley)
2. Raja Murad (Co-Founder & CEO at Carfirst)
3. Salman Wasay (Co-founder & Director at Chaaye Khana)
4. Majid Khan (CEO at Cheetay)
5. Saba Abid (General Manager at AirLift)

Session on World Politics & Trade Relations Post Covid-19

An online session on "World Politics & Trade Relations Post Covid-19" was organized on May 22, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Jauhar Saleem (Pakistan's Ambassador to Italy)
2. Asim Iftikhar Ahmad (Pakistan's Ambassador to the Kingdom of Thailand)

Design Thinking Workshop

NIC Quetta organized a 2-week online workshop during June 2020 on Design Thinking for Cohort-3 startups. This workshop was delivered by Shahid Khan, Sr Director at SAP, California, USA.

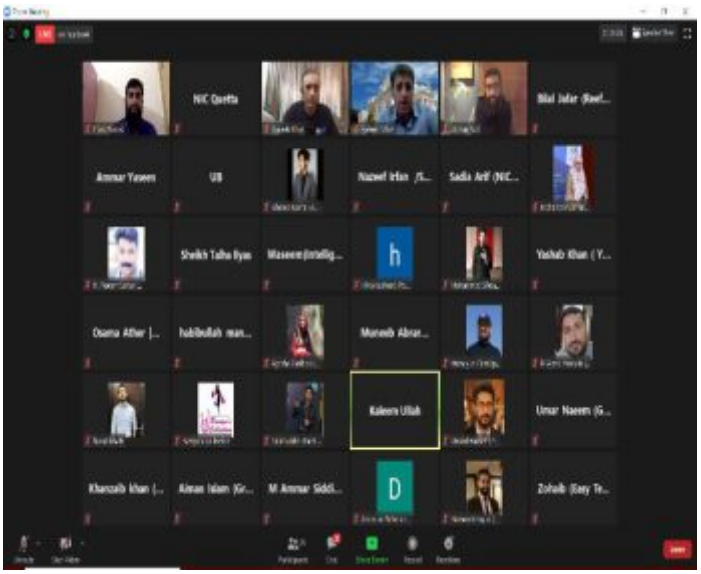
Session on Sales Plan

A online session on Sales Plan was delivered by Kaleemullah on June 25, 2020 to NIC Quetta Cohort-3 startups.

Session on Choosing the Right Technology for Your Startup"

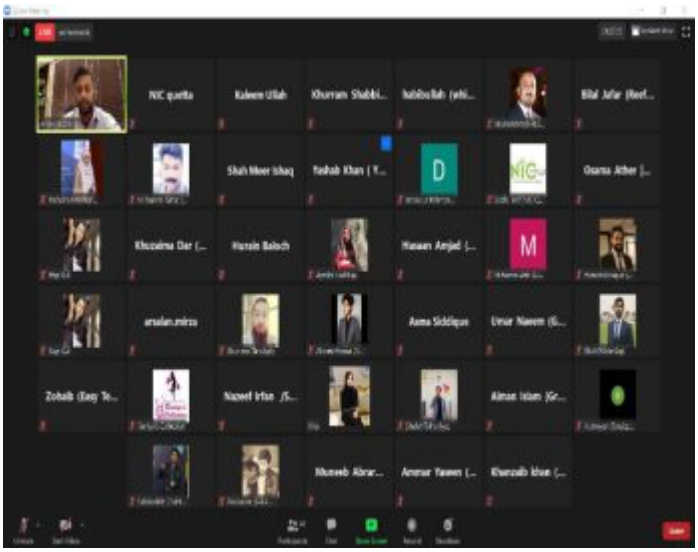
An online session on "Choosing the Right Technology for your Startup" was organized on June 26, 2020 for startups of Cohort-3. Following were the panelists of this session:

1. Haseeb Khan (Director of innovation and technology Tkxel)
2. Irfan Ahmad (CTO and Co-founder FootMetrics)
3. Usman Asif (Founder and CEO Eduleaf)



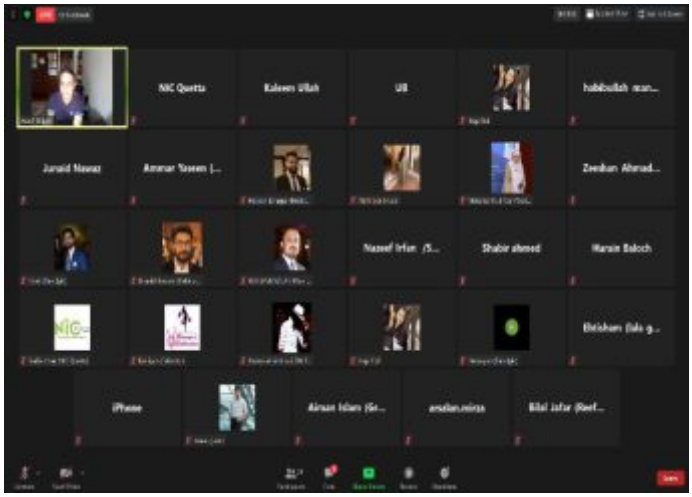
Session on Understanding Business Law

An online session on "Understanding Business Law" was organized for startups of NIC Quetta Cohort-3 on June 30, 2020. The session was delivered by Barrister Ahmed Uzair, consultant at SECP and partner at AUC Law.



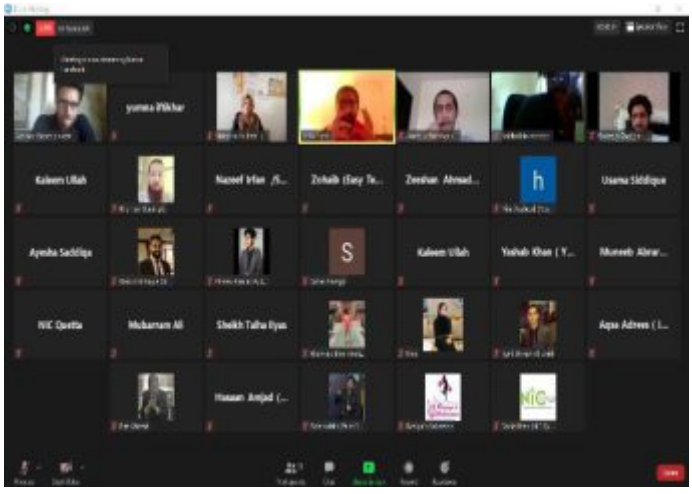
Session on Intellectual Property (IP) Rights

An online interactive session on "Intellectual Property (IP) Rights" was organized for startups of NIC Quetta Cohort-3 on July 1, 2020. The session was delivered by Wasif Majeed, representative of Intellectual Property Organization of Pakistan.



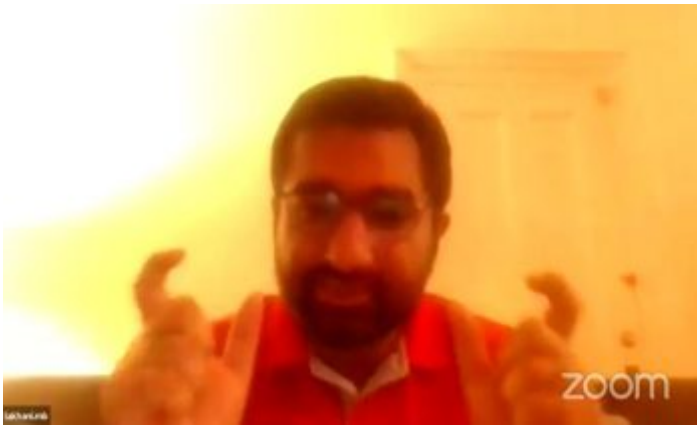
Session on Personality Development and Communication Skills

An online session on "Personality Development and Communication Skills" was organized for startups of NIC Quetta Cohort-3 on July 2, 2020. The session was delivered by Umair Jaliawala, renowned motivational speaker and CEO TORQUE.



Session on The Art of Story Telling

An online session on "The Art of Story Telling" was organized for startups of NIC Quetta Cohort-3 on Jule 3, 2020. The session was delivered by Bilal Lakhani, Communication Director at Procter and Gamble, USA.



Session on Personality Development

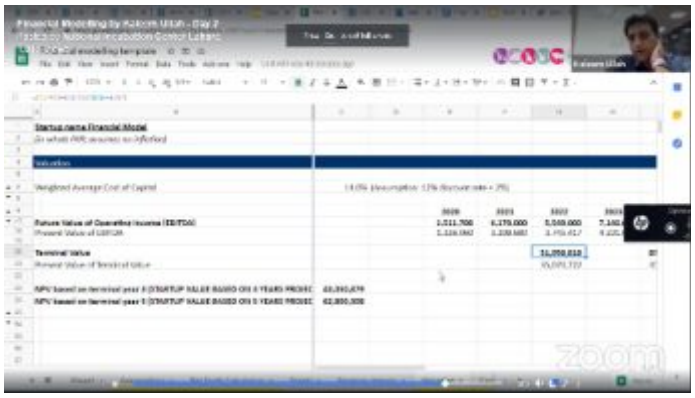
An online session on "Personality Development" was organized for startups of NIC Quetta Cohort-3 on July 3, 2020. The session was delivered by Yasmeen Butt, renowned media personality, psychologist, and a laughter therapist.

Session on The Art of Right Branding

An online session on "The Art of Right Branding" was organized for startups of NIC Quetta Cohort-3 on July 3, 2020. The session was delivered by Nabeel Qadir, Ex Director Plan-9.

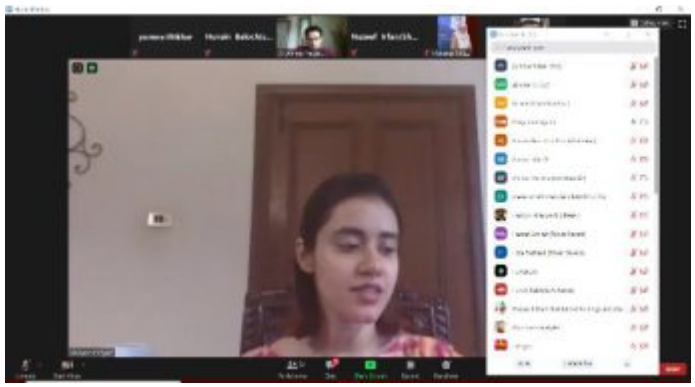
Session on Financial Modeling

An online session on "Financial Modeling" was organized for startups of NIC Quetta Cohort-3 on July 8-9, 2020. The session was delivered by by Kaleemullah, Sr Manager NIC Lahore.



Session on How to Pitch?

An online session on "How to Pitch?" was organized for startups of NIC Quetta Cohort-3 on July 16. The session was delivered by Maryam Arshad, Communication Consultant.



Session on Investors' Brief

An online session on "Preparing Investors' Brief" was organized for startups of NIC Quetta Cohort-3 on July 23, 2020. The session was delivered by Kaleemullah, Sr Manager NIC Lahore.

Investors' Summit for Cohort-3 Startups of NIC Quetta

A digital Investors' Summit was organized for the graduated startups of NIC Quetta Cohort-3 on August 6, 2020. More than 30 investors from across the world joined the summit

Outreach Campaign For NIC Quetta Cohort-4 Induction

NIC Quetta launched call for applications for its Cohort-4 induction. In addition to the social media outreach campaign, NIC Quetta organized in-person sessions in various educational institutions across Balochistan. A total of 15 outreach sessions/seminars were conducted at different institutions. Each session included a presentation on "Entrepreneurship", talk on "Business Today" and "NIC Quetta Incubation Program" followed by Q/A session. Following are the glimpses of some sessions:

National University of Modern Languages-NUML

NIC Quetta conducted an outreach session at National University of Modern Languages-NUML on September 23, 2020.

BUITEMS Faculty of Arts & Basic Sciences

NIC Quetta conducted an outreach session at BUITEMS Faculty of Arts & Basic Sciences on October 5, 2020.

BUITEMS Faculty of Biotechnology & Informatics

NIC Quetta conducted an outreach session at BUITEMS Faculty of Biotechnology & Informatics on October 6, 2020.

BUITEMS Faculty of Information & Communication Technology

NIC Quetta conducted an outreach session at BUITEMS Faculty of Information & Communication Technology on October 7, 2020.

Balochistan University of Engineering and Technology (BUET), Khuzdar

NIC Quetta conducted an outreach session at Balochistan University of Engineering and Technology (BUET), Khuzdar on October 8, 2020.

Lasbela University of Agriculture, Water & Marine Sciences - LUAWMS

NIC Quetta conducted an outreach session at Lasbela University of Agriculture, Water & Marine Sciences - LUAWMS on October 9, 2020.

University of Turbat

NIC Quetta conducted an outreach session at University of Turbat on October 13, 2020.

University of Turbat, Gwadar Campus

NIC Quetta conducted an outreach session at University of Turbat, Gwadar Campus on October 14, 2020.

Gwadar Institute of Technology

NIC Quetta conducted an outreach session at Gwadar Institute of Technology on October 14, 2020.

BUITEMS Faculty of Engineering

NIC Quetta conducted an outreach session with BUITEMS Faculty of Engineering on October 16, 2020.

University College of Zhob, BUITEMS

NIC Quetta conducted an outreach session at University College of Zhob, BUITEMS on October 20, 2020.

University of Loralai

NIC Quetta conducted an outreach session at University of Loralai on October 21, 2020.

Sardar Bahadur Khan Women University on October 27, 2020

NIC Quetta conducted an outreach session at Sardar Bahadur Khan Women's University on October 27, 2020.

University of Balochistan

NIC Quetta conducted an outreach session at University of Balochistan on October 28, 2020.

BUITEMS City Campus

NIC Quetta conducted an outreach session with BUITEMS Faculty of Management Sciences (City Campus) on October 29, 2020.

Preliminary Screening Interviews for Cohort-4 Induction

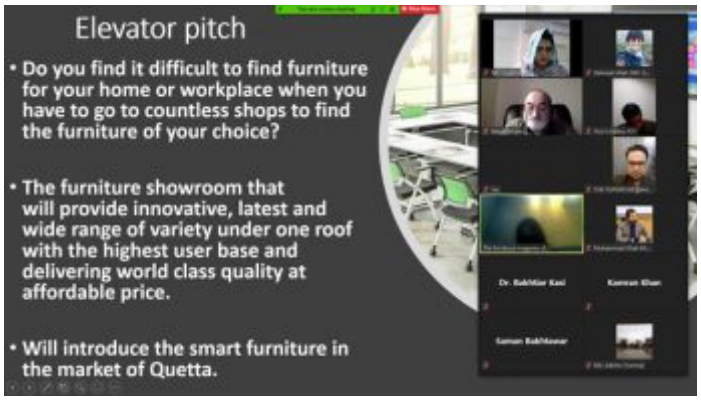
Preliminary screening interviews for cohort-4 induction of NIC Quetta were conducted throughout the month of November 2020. The most viable and innovative business ideas and teams were shortlisted for final pitching at the Foundation Council.

Pitch Preparation Session

Before pitching to the Foundation Council, NIC Quetta arranged a pre-pitch session on November 16, 2020 for all the shortlisted applicants of Cohort-4. Team NIC Quetta, along with other mentors, engaged with all startups and guided them on each step of their ultimate pitch preparation process.

Foundation Council for Induction of Cohort-4

Foundation Council (FC) for the induction of Cohort-4 was held digitally through Zoom (due to Covid-19 Pandemic) from November 26, 2020. Startups pitched their business ideas via Zoom to the honorable judges.

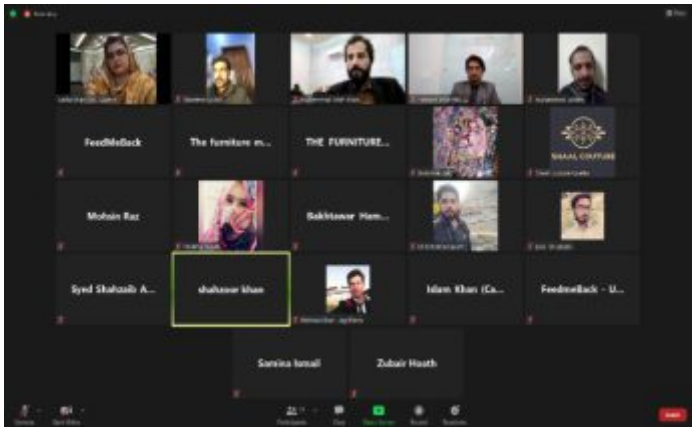


The following were startups were selected by the FC in NIC Quetta Cohort-4:

1. Shaal Couture
2. Feedmeback
3. Eqadam
4. Taskendo
5. Campus Solution
6. Charisma Studio
7. Easecad
8. Furniture Magenta
9. Techworm
10. Market Hunters
11. Agrifarm
12. Techsniff
13. Yusufi's Clothing
14. Snack Paradise
15. Created by Bibi
16. Imaginations

Cohort-4 Orientation

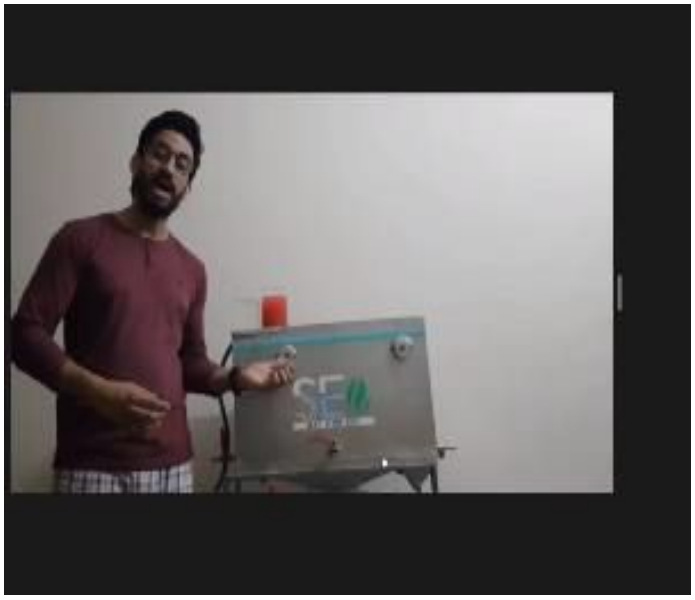
Online orientation of Cohort 4 was conducted on November 30, 2020. The selected startups of NIC Quetta Cohort-4 were welcomed and briefed about the curriculum and incubation program highlights.

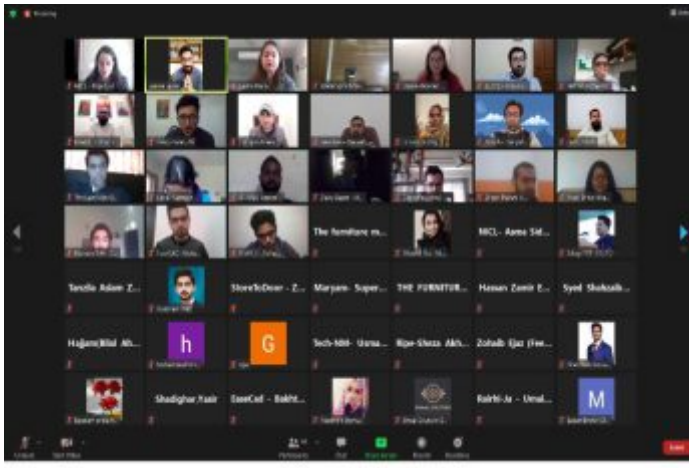


Trainings And Workshops (Cohort-4)

Session on Building Entrepreneurial Mindset

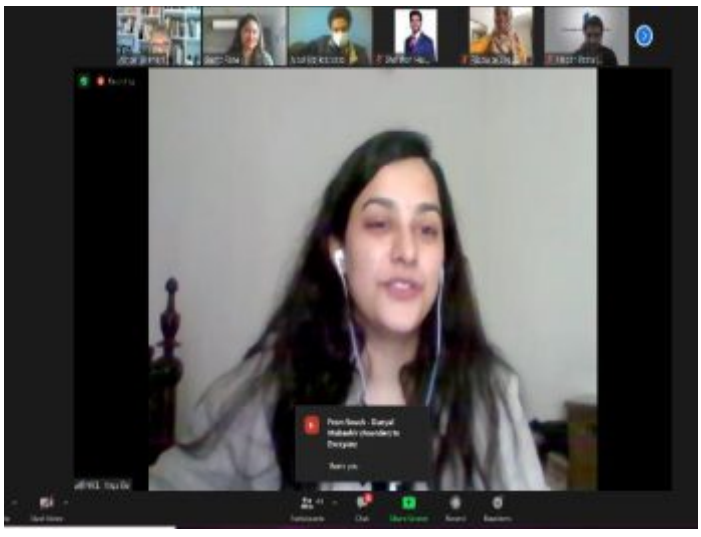
An online session on "Building Entrepreneurial Mindset" was organized for startups of NIC Quetta Cohort-4 on December 2, 2020. The session was delivered by successful alumni of NIC Lahore and NIC Quetta.





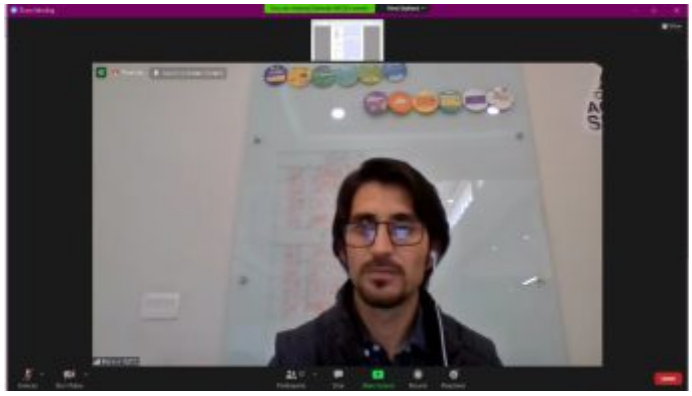
Session on Unleashing the Potential of Entrepreneurship

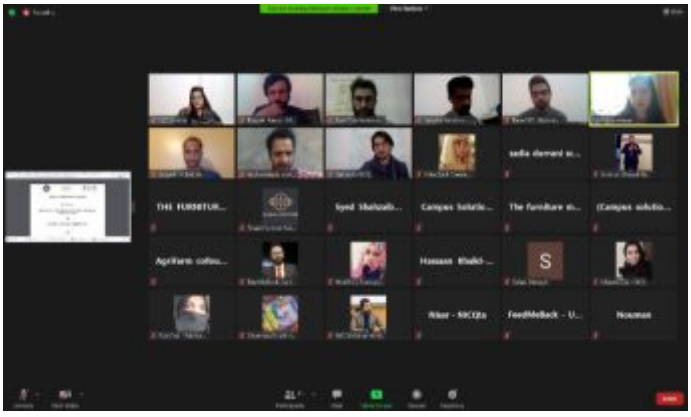
An online session on "Unleashing the Potential of Entrepreneurship" was organized for startups of NIC Quetta Cohort-4 on December 02, 2020. The session was delivered by Dr. Alnoor Bhimani, Dean LUMS Business School.



Session on Entrepreneurship Development Agreements

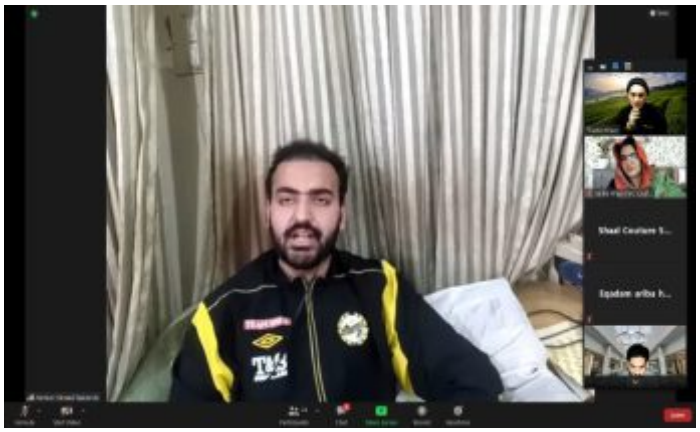
An online session on Entrepreneurship Development Agreements (EDA) was conducted with startups of NIC Quetta Cohort-4, on December 7, 2020. Mr. Rehmat Khan from NIC Quetta and Ms. Minahil Zia from NIC Lahore assisted startups understand and sign the EDAs.





Design Thinking Module - Session on Problem Validation

As part of the Design Thinking Module, an online session on "Problem Validation" was organized for startups of NIC Quetta Cohort-4 on December 17, 2020. The session was delivered by Mr. Shahid Khan, Sr. Director, SAP, California, USA.



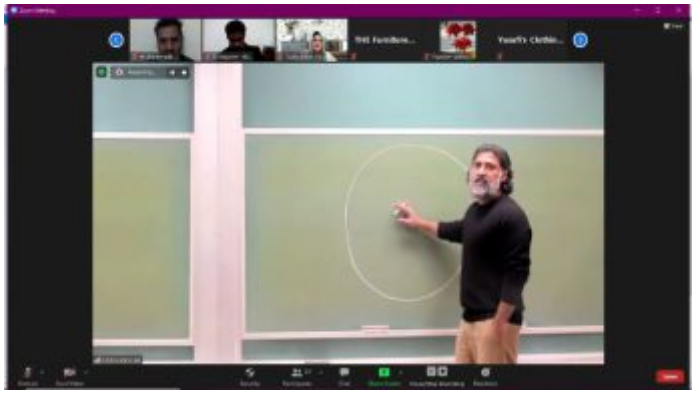
Design Thinking Module - Session on Prototype Test

As part of the Design Thinking Module, an online session on "Prototype Test" was organized for startups of NIC Quetta Cohort-4 on December 18, 2020. The session was delivered by Mr. Shahid Khan, Sr. Director, SAP, California, USA.

Strategy & Business Modelling Module – Session on Business Strategy

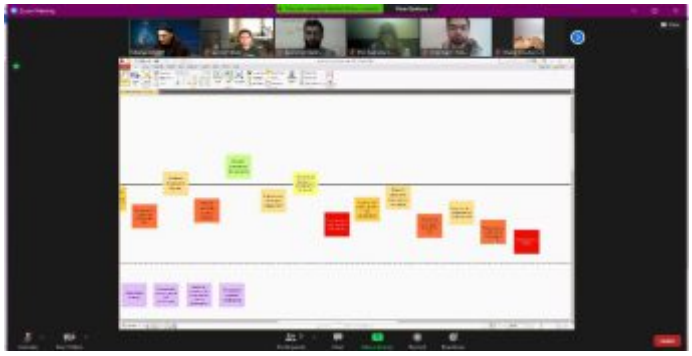
As part of the Strategy and Business Modelling Module, an online session on "Business Strategy"

was organized for startups of NIC Quetta Cohort-4 on December 21, 2020. The session was delivered by Dr. Adnan Zahid, Professor of Marketing in LUMS.



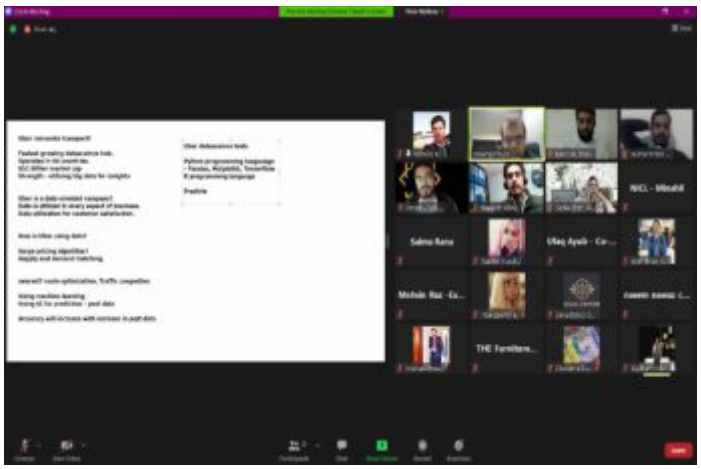
Design Thinking Module - Session on Ecosystem Innovation

As part of the Design Thinking Module, an online session on "Ecosystem innovation" was organized for startups of NIC Quetta Cohort-4 on December 22, 2020. The session was delivered by Mr. Shahid Khan, Sr. Director, SAP, California, USA.



Strategy & Business Modelling Module – Session on Data Analytics

As part of the Strategy and Business Modelling Module, an online session on "Data Analytics" was organized for startups of NIC Quetta Cohort-4 on December 22, 2020. The session was delivered by Dr. Ussama Yaqoob, Professor of Marketing in LUMS.



Design Thinking Module - Session on Achieving Product-Market fit

As part of the Design Thinking Module, an online session on "Achieving Product-Market Fit" was organized for startups of NIC Quetta Cohort-4 on December 27, 2020. The session was delivered by Mr. Shahid Khan, Sr. Director, SAP, California, USA.

Entrepreneur is Conversation Series - Session on Using Artificial Intelligence to Amplify Pakistan's Potential

As part of the Entrepreneur in Conversation Series, an online session with Dr. Ayesha Khanna, one of South East Asia's groundbreaking female entrepreneurs, was conducted on December 28, 2020.

Strategy & Business Modelling Module – Session on Business Modeling

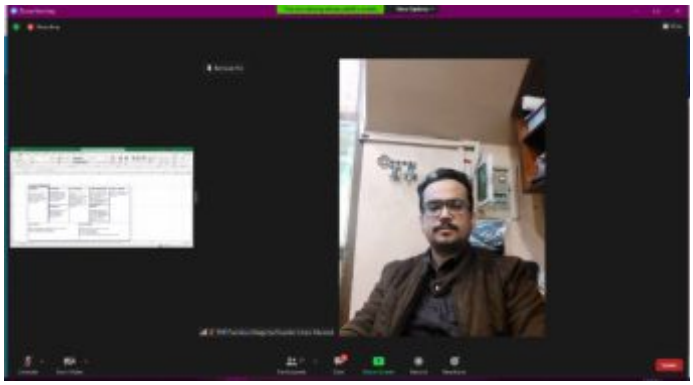
As part of the Strategy and Business Modelling Module, an online session on "Business Modeling" was organized for startups of NIC Quetta Cohort-4 on December 28, 2020. The session was delivered by Dr. Adnan Zahid, Professor of Marketing in LUMS.

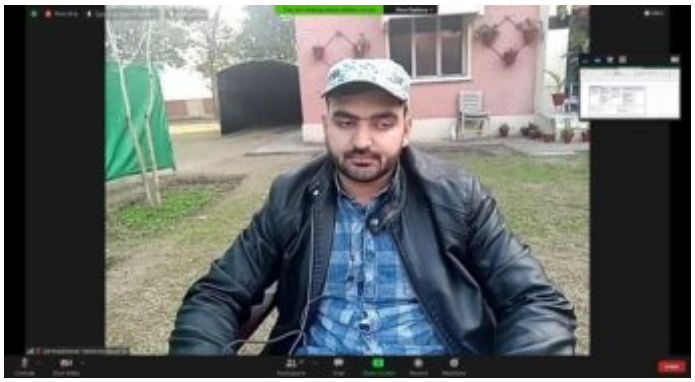
Entrepreneur is Conversation Series - Session on Pioneering Digital Credit in Pakistan

As part of the Entrepreneur in Conversation Series, an online session with Qasif Shahid, CEO and Co-Founder of Finja (a fintech start-up), was conducted on December 28, 2020.

Strategy & Business Modelling Module – Session on Business Model Canvas

As part of the Strategy and Business Modelling Module, an online session on "Business Model Canvas" was organized for startups of NIC Quetta Cohort-4 on December 30, 2020. The session was delivered by Dr. Adnan Zahid, Professor of Marketing in LUMS.



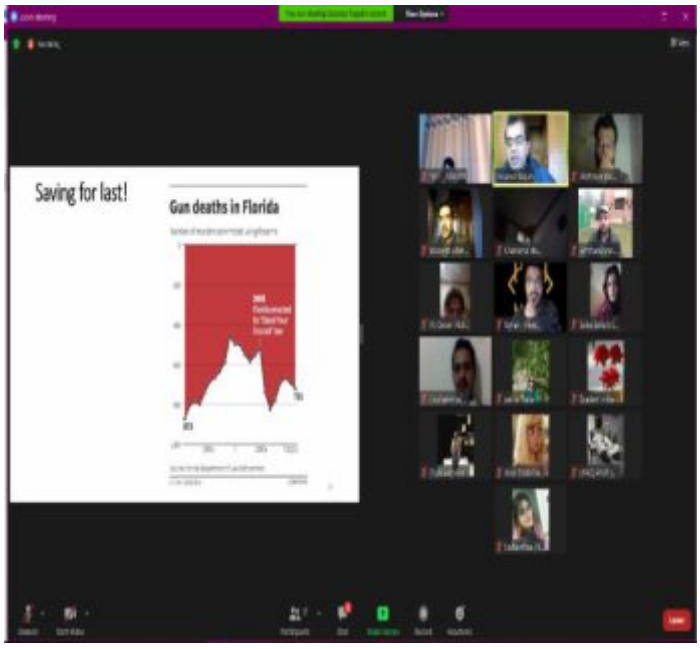


Design Thinking Module - Session on Harnessing the Ecosystem to Grow

As part of the Design Thinking Module, an online session on "Harnessing the Ecosystem to Grow" was organized for startups of NIC Quetta Cohort-4 on December 31, 2020. The session was delivered by Mr. Shahid Khan, Sr. Director, SAP, California, USA.

Strategy & Business Modelling Module – Session on Data Analytics

As part of the Strategy and Business Modelling Module, an online session on "Data Analytics" was organized for startups of NIC Quetta Cohort-4 on December 21, 2020. The session was delivered by Dr. Ussama Yaqoob, Professor of Marketing in LUMS.



NIC Quetta Achievements

Prime Minister of Pakistan Mr. Imran Khan met NIC Quetta startups

Honorable Prime Minister of Pakistan Mr. Imran Khan met NIC Quetta startups, "Smart Helmet" and "WECO" at a showcasing ceremony organized by Ignite, MoITT. The PM was delighted to meet startups from NIC Quetta and lauded efforts and performance of NIC Program in fostering entrepreneurial culture in Pakistan.

Khanmart.pk Raised a Grant of Rs. 5.3 Million

Khanmart.pk, a graduated startup of NIC Quetta Cohort-2, won a grant of PKR 5.3 Million from USAID SMEA under the program titled "Startup Challenge Fund Grants".

Autonomous Smart Wheelchair Pitched at National Investors' Summit

Autonomous Smart Wheelchair, a graduated startup of NIC Quetta Cohort-3, pitched at National Investors' Summit (NIC Islamabad). The Summit was attended by more than 40 investors.

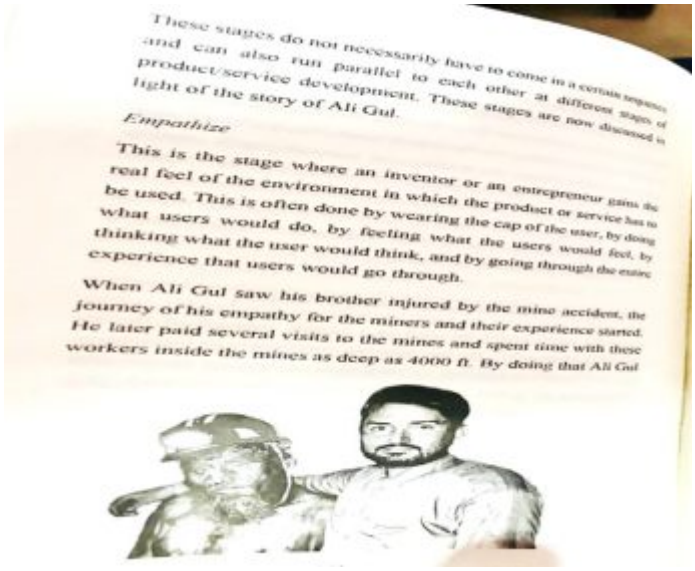
Autonomous Smart Wheelchair

YKD Farms Pitched at National Investors' Summit

YKD Farms, a graduated startup of NIC Quetta Cohort-3, pitched at National Investors' Summit (NIC Islamabad). The Summit was attended by more than 40 investors.

Enhanced Version Prototype of Smart Helmet Finalized and Tested

Gul Tech, a graduated startup of NIC Quetta Cohort-1, finalized and tested an enhanced version of its prototype of Smart Helmet. This life-saving Helmet is designed for coal-mine workers who work under extreme conditions inside mines. The Helmet has features like gas detection and automatic alarm generation using machine learning and AI algorithms. Gul Tech had won a grant of PKR 14 Million last year for enhancing its Smart Helmet Prototype.



These stages do not necessarily have to come in a certain sequence and can also run parallel to each other at different stages of product/service development. These stages are now discussed in light of the story of Ali Gul.

Empathize

This is the stage where an inventor or an entrepreneur gains the real feel of the environment in which the product or service has to be used. This is often done by wearing the cap of the user, by doing what users would do, by feeling what the users would feel, by thinking what the user would think, and by going through the entire experience that users would go through.

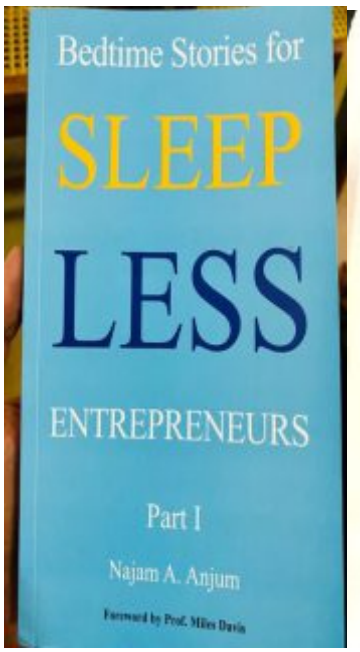
When Ali Gul saw his brother injured by the mine accident, the journey of his empathy for the miners and their experience started. He later paid several visits to the mines and spent time with these workers inside the mines as deep as 4000 ft. By doing that Ali Gul

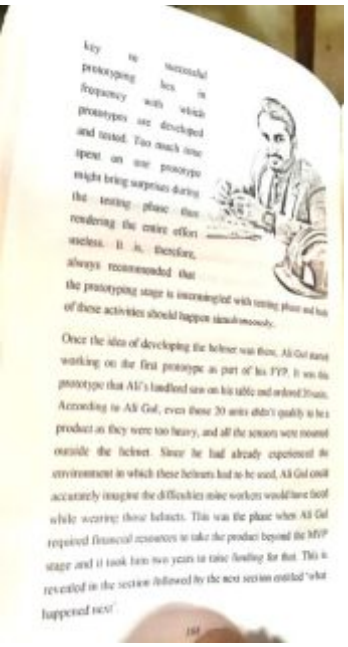
Doch Pvt Ltd. Wins She Loves Tech (Gilgit Baltistan-Balochistan Round)

DOCH, a graduate of Microenterprise Program of NIC Quetta, won Gilgit Baltistan-Balochistan Round of She Loves Tech competition.

NIC Quetta Startup Featured in Book

Gul Tech, a graduated startup of NIC Quetta Cohort-1 and creator of Smart Helmet, was featured as a success story in a recently published book "Sleep Less Entrepreneurs" authored by Dr. Najam A. Anjum (2020).





NIC Quetta Participated in Asia-Berlin Summit

NIC Quetta participated in Asia-Berlin Summit 2020 held in Berlin, Germany. Director NIC Quetta Muhammad Shah Khan was one of the keynote speakers and delivered a talk on "Tech Startup Ecosystem in Pakistan." The Summit was attended by various stakeholders from Germany and Pakistan including the Ambassador of Pakistan in Germany, Dr. Muhammad Faisal and Board Member of Asia-Pacific Forum, Berlin, Dr. Talat Mahmood. Later in the Summit, three bright startups from NIC Quetta (Autonomous Wheelchair, Gul Tech and Khanmart.pk) presented their startups and were appreciated from attendees.

Bio-D Fuel participated at Climate Launchpad Pakistan 2020

Bio-D Fuel, a graduated startup of NIC Quetta Cohort-2, presented his startup at the Climate Launchpad Pakistan 2020.

NIC Quetta Startups at NIC Program Startups Demonstration & Pitching Session

NIC Quetta startups, Gul Tech and Kahnmart.pk represented NIC Quetta in the "NIC Program Demonstration & Pitching Session" held at Sir Syed University of Engineering & Technology (SSUET) Karachi under the auspices of Ignite, MoITT. Syed Amin ul Haque, Federal Minister for IT & Telecom interacted with the NIC Program startups and appreciated them for showcasing their success.

NIC Quetta Becomes Member of UBI Global

NIC Quetta joined UBI Global as member incubator to become part of world's largest online community of business incubators.

NIC Quetta Becomes Member of Silk Road High Tech Park Association (SRHPA)

NIC Quetta joined Silk Road High Tech Park Association (SRHPA) as member in the 5th Forum of SRHPA 2020. Addressing the forum, Director NIC Quetta Muhammad Shah Khan stated that NIC Quetta hopes for mutually beneficial cooperation among the member tach parks and incubators.

NIC Quetta Partnered Events

2-Day Entrepreneurship Event in Collaboration with Women Chamber of Commerce

NIC Quetta, in collaboration with, Bank Alfalah and Women Chamber of Commerce conducted a 2-Day SME Awareness session at BUITEMS. Small and medium enterprises and members from women chamber of commerce participated in this event.

Education Hackathon 2020

NIC Quetta partnered with NIC Karachi as a strategic partner for Education Hackathon 2020

Built by Her Coding Hackathon 2020

NIC Quetta partnered as Ecosystem Partner with NIC Karachi for Built By Her Coding Hackathon 2020.

021 Disrupt Entrepreneurship Conference 2020

NIC Quetta partnered as Community and Outreach Partner for 021 Disrupt Entrepreneurship Conference 2020 conducted by Nest I/O

Civic Hackathon 2020

NIC Quetta partnered as Community and Outreach Partner for Civic Hackathon 2020 by Code for Pakistan.

WeRaise 2020

NIC Quetta partnered as Community and Outreach Partner with i2i Pakistan for WeRaise 2020.


MEDICAL
MEDICAL
MEDICAL
MEDICAL
Health Care
Doctor
Hospital
Pharmacist
Nurse
Dentist
First Aid
Surgeon
Emergency

BUITEMS Medical Center

Introduction

BUITEMS has strived to provide extensive facilities to its students and the medical center is a step toward that purpose. The Medical center is providing health facilities to students and staff members. The medical team includes two medical officers, two male nurses and male nursing assistance laboratory Attendant and Two ward boys.

The establishment of the medical center at the Takatu campus is a significant feature of progress, with two wards and two emergency stations to handle emergencies.

Performance

Total Number of Patients year 2020				
Campus	Children	Male	Female	Total
Takatu Campus	425	1495	390	2310
sCity Campus	55	480	190	725
Total	480	1975	580	3035

Activities

The BUITEMS medical center has taken Two hospitals on the panel for tertiary care of their staff and family. Following is the date of referral patient for tertiary care.

General OPD	Gynae OPD	Surgery	Normal Delivery	Laboratory	Total
132	115	09	06	52	314

COVID-19 Screening

During the covid-19 pandemic, screening was done. Multiple times (including staff and students) **Total Test = 950**

Training of medical staff

The medical staff was trained about the screening of covid-19 with help of D.G health Balochistan and developed a testing facility at BUITEMS medical centre.

Medicines

BUITEMS provides quality and excellence in education. It is the hard work and dedication of its faculty and administrative staff that made such achievement possible.

BUITEMS also gives the advantage of the medical facilities free of cost to its employees and students at the medical center in the City and Takatu campus.

Laboratory Facilities

Minor tests such as Blood glucose, Blood Group and HbsAg, are conducted free of cost within the medical center.

Emergency Services

BUITEMS Medical center also provides emergency services to Students and employees. In case of Injuries, our qualified staff members provide first aid and dressing facilities at their medical center and if the patient is referred our staff members also do a follow-up in tertiary care. An ambulance is also available for an emergency referral.

16th Convocation

Virtual Graduation Ceremony

BUITEMS Convocation 2020

The year 2020 came with a challenge in the form of a global pandemic that demanded certain limitation and restriction. Convocation ceremonies usually are an opportunity for the graduates to not only formally bid goodbye to their alma mater but also an opportunity to meet their teachers and express their gratitude to the institute. The contagion transformed that tradition and the university opted for a virtual convocation ceremony. The virtual ceremony was pre-recorded during December 2020 following all the SOPs.

The virtual ceremony started with the national anthem followed by recitation of the Holy Quran by Syed IzzatUllah and Naat by Hasnain Abbas. Mr Umar Ajmal and Ms Laibah Durrani were masters of the ceremony. The Communication team recorded Chancellor's speech at Governor House. In his address, governor Balochistan and Chancellor Balochistan informed the graduates about the relationship between inner peace and the power of making the right decision. He urged the students to keep learning and adding to their knowledge as well as advocated them to read every day. He concluded his speech by congratulating the graduates and their parents.

The worthy Vice-Chancellor, Mr Ahmed Farooq Bazai recorded his speech at the Conference Room. He informed the graduates about the scenario in which it became inevitable to have a virtual ceremony maintaining BUITEMS' tradition of conducting consecutive convocation. He urged the students to look at the brighter side of the pandemic and count the blessings. He added that being open to change and new challenges open doors to new possibilities. In the end, he for the first time in BUITEMS' history virtually congratulated all the graduates, their parents and the BUITEMS family and appreciated their resilience.

BUITMES Music Club played a beautiful song celebrating the power of hope and resilience. The song was a combined effort of Bahadur, Hasnain, Malaika, Azor, Adnan, and Saud Waqas who played the song via zoom.

In total 668 students including 17 Masters and 03 Doctorates, degrees were awarded. Those who excelled and scored highest were awarded Gold Medals and Badges of Honor. 35 brilliant students achieved gold medal whereas 09 received Badges of Honor. The virtual ceremony ended with a dua for the students, the institute, the BUITEMS family and Pakistan.


BUITEMS


BUITEMS


BUITEMS


BUITEMS


BUITEMS

Award of Badges of Honor

Through the award of Badges of Honor to our graduates we concede their work and outstanding accomplishments which are hard earned over a lifetime of passionate commitment to the highest standards in scholarship within their field of study.

Waqas Ahmed
3.43
Spring-2017
MS (Chemical Engineering)

Jawad Khan
3.34
Spring -2016
BS (Economics)

Muhammad Mazhar
3.66
Spring-2016
MS (Telecommunication Engineering)

Rukhsana Rehmat
3.54
Fall-2016
BS (Chemistry)

Asim Khan
3.64
Spring-2016
MS (Economics)

Azra Kasi
3.39
Fall-2016
BS (Sociology)

Abdul Qahir
3.37
Spring-2018
MS (Economics)

Muhammad Noman
3.68
Fall-2015
B (Architecture)

Yawar Ayub
3.41
Spring-2016
BS (Public Administration)

Award of Gold Medals

Academic excellence is the cornerstone of a university. We take pride in our Gold Medalist graduates, who were willing to strive for the best, rather than settle for average performances. Indeed, the students that we are honoring here have not accepted to be second best in their study program.

Imran Rab Nawaz
3.87
Spring-2018
MS (Chemical Engineering)

Muhammad Amjad Khan
3.76
Spring-2017
MS (Environmental Management & Policy)

Samiullah
3.80
Spring-2018
MS (Physics)

Hakim Ullah
3.77
Spring-2017
MS (Chemistry)

Saiful Hanan
3.75
Spring-2018
MS (Chemistry)

Shamaila Sohail
3.80
Spring-2018
MS (Management Sciences)

Dowlat Khan
3.96
Spring-2017
MBA (Banking & Finance)

Naqash Johar
3.93
Spring-2018
MBA (Evening 2 Years)

Abdul Haseeb Siddiqui
3.70
Spring-2019
MBA (1.5 Years Evening)

Sana Tareen
3.86
Fall-2016
BS (Business Administration)

Muhammad Sharif
3.78
Fall-2016
BS (Economics)

Faiza Nadeem
3.96
Fall-2016
BS (Civil Engineering)

Shahzeb Alamgir
3.93
Fall-2016
BS (Mechanical Engineering)

Zafar Injam
3.88
Fall-2016
BS (Geological Engineering)

Award of Gold Medals

Zeeshan Khan
3.92
Fall-2016
BS (Chemical Engineering)

Sameed Islam
3.83
F all-2016
BS (Mining Engineering)

Salman Ahmad
3.85
Fall-2016
BS (Textile Engineering)

Aqrab Ullah
3.81
Fall-2016
BS (Petroleum & Gas Engineering)

Muslim Ali Zafar
3.88
Fall-2016
BS (Computer Science)

Mohammad Abdullah
3.99
Fall-2016
BS (Electronic Engineering)

Aurangzaib
3.95
Fall-2016
BS (Software Engineering)

Baneen Zahra
4.00
Fall-2016
BS (Information Technology)

Muhammad Shahzeb Khan
3.97
Fall-2016
BS (Computer Engineering)

Najeeb Ullah
3.96
Fall-2016
BS (Electrical Engineering)

Syed Tamoor Shah
3.87
Fall-2016
BS (Telecommunication Engineering)

Wahid Bakhsh Baloch
3.90
Fall-2016
BS (Environmental Science)

Fareeha Jaffar
3.98
Fall-2016
BS (Biotechnology)

Naina Kalra
3.78
Spring-2016
BS (Microbiology)

Gullasht Nadeem
3.86
Fall-2016
BS (Microbiology)

Fatima Mehmood
3.82
Fall-2016
BS (English Language & Literature)

Award of Gold Medals

Muhammad Ishaq
3.99
Fall-2016
BS (International Relations)

Fahiem Ul Haq Abdullah
3.95
Fall-2016
B (Fine Arts)

Adila Batool
3.74
Fall-2016
BS (Mass Communication)

Mahwish Batool
3.78
Fall-2016
BS (Mathematics)

Areeba Naeem
3.89
Fall-2016
BS (Physics)

Infrastructure Development

Infra-Structure Development

Every year the infrastructure and facilities at all the campuses of BUITEMS are developing as per the most demanded and state of the art functional requirements of a highly ranked University. Within a span of a short time the academic, research, sports, residential and basic infrastructure facilities have been developed BUITEMS.

Besides the established facilities several new project proposals have been submitted to the quarters concerned which will further strengthen the infrastructure at all the campuses of BUITEMS.

LAN/WAN Facilities

LAN/WAN facilities and new furniture for classrooms, seminar halls, labs etc for Construction of Academic Block will be provided this year.

Construction of Residential Colony

Construction of Residential Colony has been completed.

Construction of Housing Facility

Construction of Housing facility for faculty and staff has been completed.

The swimming pool

The swimming pool at Multipurpose Sports Complex will be functional from this year.

Indoor Sports facilities

Indoor Sports facilities like squash courts, tennis courts, shooting range and bowling alley will be available from this academic year.

Construction of new Masjid

Construction of new Masjid with separate space of girls has been started.

Construction of permanent campus

University College Zhob has been started. The groundbreaking ceremony of the permanent campus was conducted on 13th October 2020. Honourable Governor Balochistan was the chief guest of the ceremony.

Sports Facilities at University College Zhob, BUITEMS.

Interim setup of University College Zhob, BUITEMS is operative and sports facilities like Cricket Practice area, futsal court and basketball court have been completed.

The Access Road

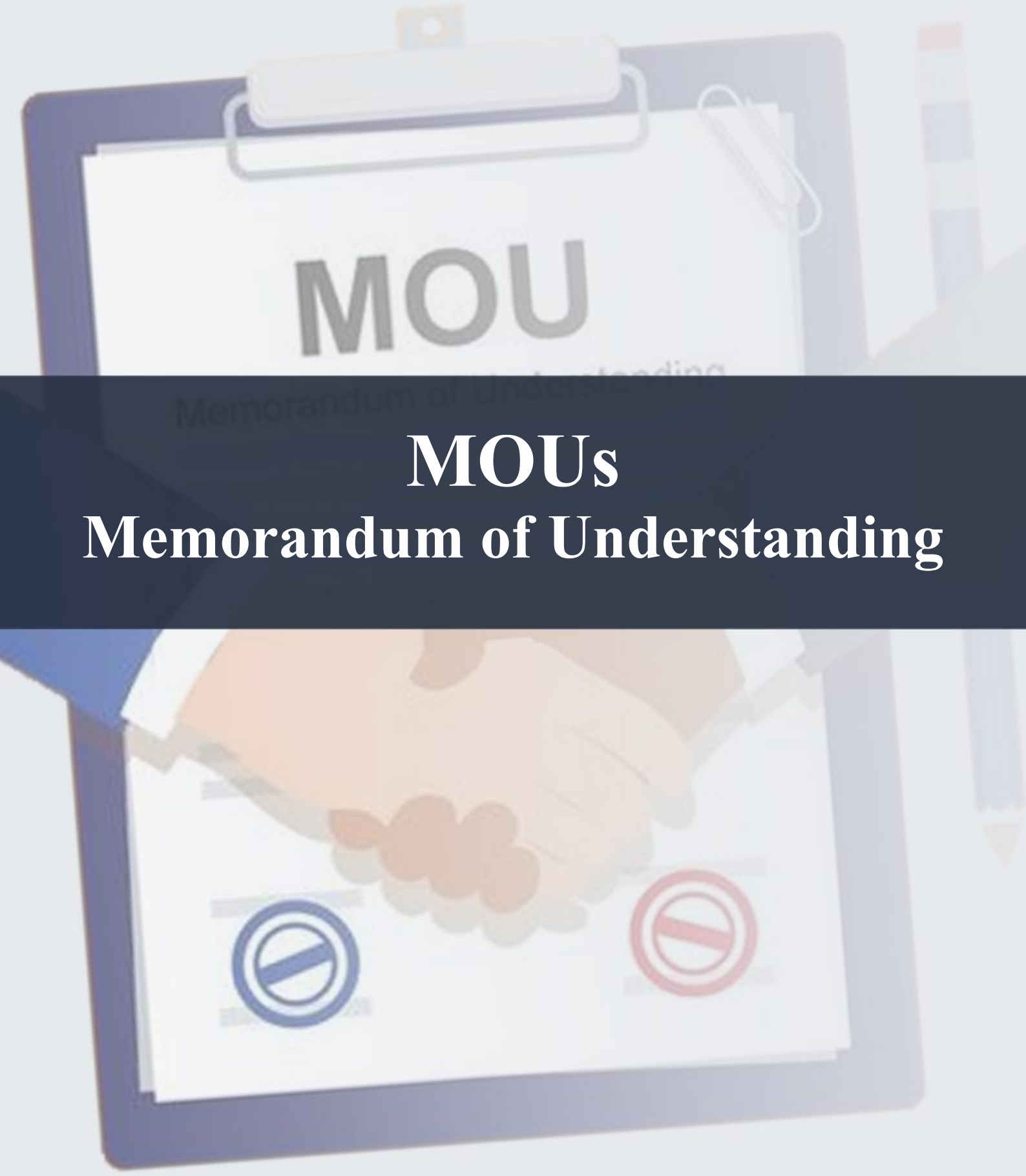
The access road for University College Zhob has been completed.

Maintenance work at Sub Campus Muslim Bagh

Maintenance work at Sub Campus Muslim Bagh, BUITEMS has been completed and the campus is operative and classes have been started.

Construction Work at permanent Sub Campus BUITEMS

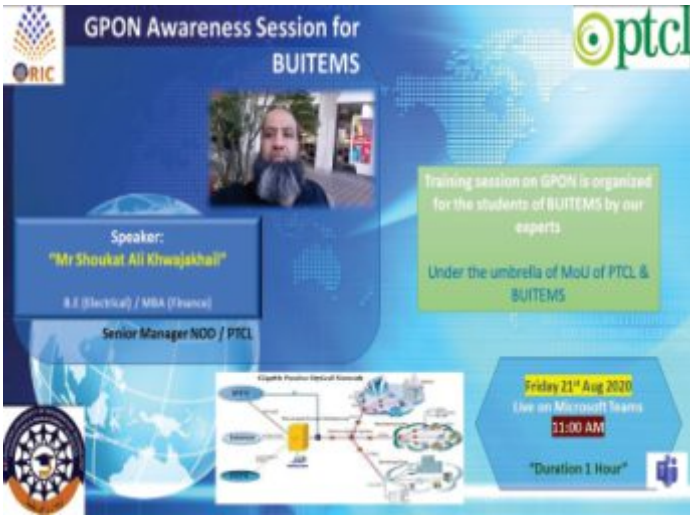
Construction Work at permanent Sub Campus, BUITEMS, Muslim Bagh will be started this year.

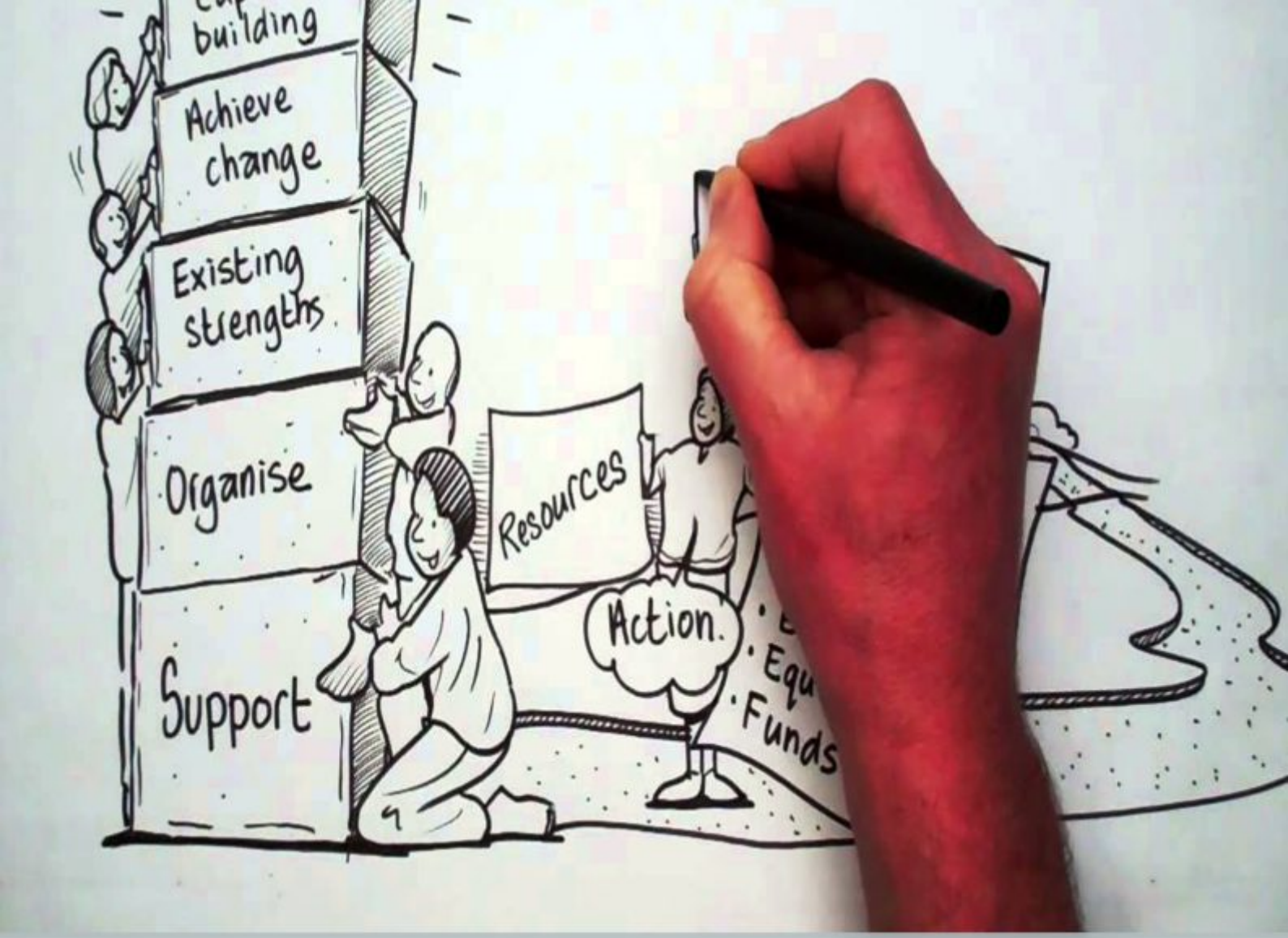


MOUs
Memorandum of Understanding

GPON Awareness Session

Pakistan Telecommunication Company Ltd-PTCL conducted an online session under the umbrella of MoU of PTCL and BUITEMS on August 21, 2020. The session was on new technology in the telecommunication world, “Gigabit Passive Optical Network (GPON) Awareness” for students and faculty members of BUITEMS. Senior Manager NOD/PTCL Engr. Shoukat Ali Khawajakhail was the speaker who provided a detailed presentation on Gigabit Passive Optical Network-GPON. The interactive training was concluded with the question and answer session and in the end, Director and Deputy Director, ORIC appreciated the efforts by PTCL.





BUITEMS

Building Communities

Ehsaas Undergraduate Scholarship Program

Higher Education Commission (HEC) and Benazir Income Support Program (BISP) have agreed with the "Ehsaas Undergraduate Scholarship Project". The principal objective of the Ehsaas Program is to assist the maximum number of students who have secured admission in the universities at the undergraduate level but lack of financial means hinder their studies. Ehsaas scholarship program was announced on November 17, 2019, through an online portal. The Meeting of the Institutional Scholarship Award Committee (ISAC) was held on May 11, 2020. The selection of the deserving students was made as per the policy of the Ehsaas UG Scholarship Project. The committee members, after a thorough review of the evaluation sheet, recommended the most deserving students for the award of scholarships. The details are as following:

	Undergraduate Female	Undergraduate Male	Total
Total number of applications received	164	965	1129
Total Number of applicants selected	77	517	594

DEWATS Joint Call of S4M (Save for Millions)

Under the cover of a signed MoU between ORIC-BUITEMS and Sanitation for Million (S4M) Project GIZ Germany, the construction work of a Decentralized Waste Water Treatment System (DEWATS), was started at the Takatu campus on June 15, 2020. The system capacity is 60.5 cubic meters with an estimated cost of Rs. 12 Million. Subject construction work is carried out by the funding of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), whereas Bremen Overseas Research & Development Association (BORDA) is responsible for the design, supervision and capacity building of faculty. Balochistan Rural Support Program (BRSP) in cooperation with GIZ and BUITEMS is guiding local service providers and executes tenders etc.

A joint meeting for this purpose was conducted on Microsoft Teams on June 23, 2020, where members representing GIZ, BORDA, BRSP and BUITEMS participated and discussed the overall construction design, capacity building measures and curriculum to be included in the courses of few relevant departments under the chair of Prof. Dr. Muhammad Naeem Shahwani, Director ORIC and the focal person from BUITEMS of the joint venture.

Balochistan Education Endowment Fund (BEEF) Cheque Distribution

BUITEMS Financial Aid office arranged BEEF cheque distribution for the meritorious students from June 25-29, 2020 at the Takatu campus. The distribution was organized to disburse the cheques among the students from all the disciplines studying at BUITEMS. In total 448 Students were awarded, a total amount of Rs. 29,280,000 (Rs.60000/-each) under BEEF Scholarships Policy 2018-19 covering students of 2nd & 3rd Professional of BS Program. The prescribed Standard Operating Procedures (SOPs) for COVID-19 were followed strictly during the distribution event.

World Hypertension Day

In collaboration with the Pakistan Hypertension League BUITEMS structured a world hypertension day awareness session on October 16, 2020, with the theme of "measure your blood pressure control it, live longer" to bring awareness among people from all circles of society about its prevention and control. Hypertension is one of the major risk issues for cardiovascular diseases and stroke. Dr. Sri Chand was the focal person of this event. Dr. Jalal-u-din Achakzai, Professor and Chairman, Cardiology Dept. BUMHS Quetta) was invited to deliver and explain Hypertension, and its symptoms.

Donated books by Alkhidmat Foundation Balochistan

The BUITEMS library organized a ceremony on October 29, 2020, where Alkhidmat Foundation Balochistan donated 5,083 books to the Balochistan University of Information Technology, Engineering & Management Sciences Library. The books were gifted by Muhammad Azam from Glasgow Scotland. The Assistant Secretary-General, Alkhidmat Foundation (Pakistan) Mr. Ahmed Jamil Rashid and Alkhidmat Foundation President, Engr. Jamil Ahmed Kurd (Balochistan), Secretary-General Mr. Ejaz Mehbob, Regional Manager Mr. Abdullah Khan were present. Respected Pro Vice-Chancellor BUITEMS, Dr Faisal Ahmed Khan presented gifts and a note of thanks to the donors.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BUITEMS
Quality & Excellence in Education

Quality Policy Statement

BUITEMS contributes in defining standards and systems for the uplift of socio-economic order through quality education and services by:

- Providing an environment conducive to learning, teaching, academic inquiry and innovation
- Maintaining academic excellence and professionalism
- Adhering to established systems for ensuring good governance for management and transfer of knowledge
- Benchmarking with other leading institutions of higher education for improvement
- Enhancing efficient and effective operations by encouraging participation of stakeholders
- Pursuing continuous improvement through creativity, team work and adaptation to change

for

Playing a catalytic role to achieve the national, regional and global harmony.

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