



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

DUHS

ANNUAL STANDARDIZED REPORT

2021-22



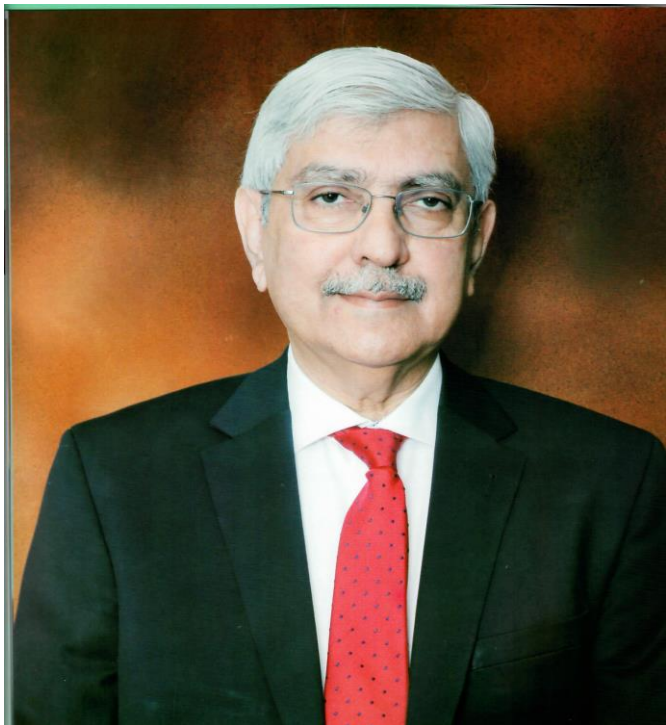
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MESSAGE BY THE VICE CHANCELLOR

Continuous improvement and progress in research, scholarship and clinical service is key to the progress of our University. There have been many developments at DUHS and its attached hospital entities over the past year. We have invested in teaching, learning and research through the budget, and many infrastructure related projects have also been completed in the past year. DUHS has also acquired and expanded at the campus through the generosity of its graduates who wished to contribute to their alma mater. This has helped us to realize the mission of this University, which is, 'Providing outstanding patient centered education, training and clinical care, informed by cutting edge research and innovation generating and disseminating new knowledge'.

At DUHS, a complete transplantation program, under one roof, liver, renal and bone marrow transplants is now being offered to the patients through the National Institute of Solid Organ and Tissue Transplantation at DUHS (NISOTT). Sindh Govt. has fully patronized our liver transplant program, as per the national health priority. Furthermore, we have also recently inaugurated the Gamma Knife Radiosurgery Center, at the OJHA Campus, where it has become possible to provide cost effective treatment for patients with brain disorders & cancers. It is also serving as a Research base to find solutions to problems pertinent to cancer patients, ultimately serving as a nucleus for the control of cancer in the province of Sindh and all over Pakistan. More than more than 500 gamma knife procedures have been done since August 2021 till now.

In terms of an enhanced infrastructure, the Advanced Molecular Genetics and Genomics Disease Research and Treatment Center is now completed. This will provide a world class sustainable and multidisciplinary cutting-edge genomic facility that will bring together academia and health care providing sectors of the country together to provide genetic testing and advanced therapeutic modalities using genetic approaches leading to the broader concept of 'Personalized Medicines' in future. It will also generate high quality tasks for the field by providing graduate and post-graduate education that will promote national knowledge-based economy through applied genomics research outcomes.

With a commitment to quality education, the Dr. Asif Rehman High Fidelity Simulation Center at DMC is also now operational with mannequins to familiarize and equip students with artificial representation of the practice of medicine, starting from the very first year. This project was funded by the DMC graduates class of 1990, with equipment provided by DUHS to the tune of 150 million, for the use of any undergraduate student in the art of medicine, and with the availability of high fidelity simulators, anatomical software representations, and much more. To enhance teaching infrastructure, we have also recently completed and made operational the New Pharmacy block, which will cater to more than 600 undergraduate and postgraduate pharmacy students to be able to add to the trained human resource professionals in the pharmaceutical sciences. Lastly, I would like to share that the University is now ranked both regionally and internationally, with a climb in the QS World Asia Ranking from 451 (2020) to 351-400 in 2022, which is a significant milestone for the University. We are also ranked #2 in the subject of Medicine regionally consistently. I look forward to more future prosperous years of DUHS.

PROF. MOHAMMED SAEED QURAISHY, VICE CHANCELLOR, DOW UNIVERSITY OF HEALTH SCIENCES

PRO- VICE CHANCELLORS, DOW UNIVERSITY OF HEALTH SCIENCES



Prof. Dr. Kartar Dawani,

MBBS, M.PHIL. (CHEMICAL PATHOLOGY)
PROFESSOR OF PATHOLOGY



Prof. Dr. Nusrat Shah

MBBS, FCPS, MHPE
PROFESSOR OF OBSTETRICS & GYNECOLOGY

EXECUTIVE SUMMARY (2021-2022)

Founded in December 2003, the Dow University of Health Sciences (DUHS) has developed a tradition of excellence in education, research, value based clinical care and community service. In 2021-2022, the University has approximately 7856 enrolled undergraduate and postgraduate students. The DUHS has 49 academic institutes, colleges, institutes and research entities, including core departments, such as QEC & ORIC. The University currently has more than 4000 employees, including approximately 942 faculty members as of 2021-2022.

The Dow University of Health Sciences (DUHS) offers a multitude of undergraduate and postgraduate programs that cater to the needs of the medical, allied healthcare sciences and management sciences. At the global level, good quality research creates a demarcation between a college and a University, and the same has been integrated within the curricula of the undergraduate and postgraduate studies at DUHS. DUHS also emphasizes integrating community and clinical services as a major part of its regular curricula in the form of clinical clerkships, house jobs and other internship opportunities offered to undergraduate students.

During the year 2021-2022, the University initiated collaborations with international universities, global associations, and international research scholars to enhance the quality of research activities and ultimately, the demand for our graduates worldwide.

In 2021-2022, the focus of the University was providing student centric education and an enhanced learning environment, and upgrading the teaching tools and infrastructure of the University. Students have had opportunities to participate in the hands on training workshops and professional trainings offered through the Professional Development Centers (PDC) of the university, which is now further enhanced with a state of the art, fully equipped simulation lab with advanced simulation manikins, high fidelity simulators, even an environment simulating the ICU and the operation theatre for the undergraduate medical student, to enhance the quality of their learning experience. Furthermore, the University actively funded research projects through the VCSFI, and provided research publication fees through a new policy to any researcher publishing in high quality, impact factor journals.

The strategic aim is to enhance employee & faculty development and heighten productivity in high quality research activities, in order to make an impact in research and other scholarly activities in the world of medicine and the biomedical sciences by the year 2024.

VISION STATEMENT

**“To Be a Pre-Eminent Academic Institution
Committed to Changing and Saving Lives”**

MISSION STATEMENT

**“Providing Outstanding Patient Centered
Education, Training and Clinical Care
Informed by Cutting Edge Research and
Innovation Generating and Disseminating
New Knowledge”**

DIVERSITY STATEMENT

We demonstrate equal employment opportunity without any discrimination to gender and encourage a participative work culture of equality and professionalism in all the endeavors at DUHS, these aspects which include recruitment and hiring, learning & development, performance enhancement and other opportunities.

NON-DISCRIMINATION AGAINST WOMEN

The scope of non-discrimination with regard to gender on admission of students is covered in The DOW University of Health Science Act 2004 which states in Clause No. 5.1 Under Section University Open to All that, “The University shall be open to all persons of either sex of whatever religion, race, creed, color who are academically qualified for admissions to the courses of study offered by the university and no such persona shall be denied to the privilege on the ground of only sex, religion, creed, race, class, color”.

NON-DISCRIMINATION FOR TRANSGENDER

Section 3(3) of Transgender Persons (Protection of Rights) Act, 2018 states, “every transgender person, being the citizen of Pakistan, who has attained the age of eighteen years shall have the right to let himself or herself registered according to self-perceived gender identity.” Accordingly, DUHS encourages all gender identities to apply for employment as well as admissions to the courses of study offered by the University and no such person shall be denied the privilege on this ground.

ABOUT DOW UNIVERSITY OF HEALTH SCIENCES (DUHS)

Dow University of Health Sciences (DUHS) is a premier institute offering MBBS and BDS undergraduate education, with a strong emphasis in the medical, biomedical sciences, public health, allied health sciences and business management programs. The University has one main campus, and another sub-campus located in the urban metropolitan city of Karachi, Sindh. The University has a school of Postgraduate studies, which offers postgraduate and doctoral programs in almost all academic disciplines relating to the biomedical and health sciences, including clinical diplomas in 13 specialties, Masters/MS /MPhil and Ph.D. programs in 32 different specialties, such as Master of Advanced Physiotherapy, Masters in Nursing, Master of Business Administration, with 18 specialties of the biomedical and basic sciences offered at the MPhil level, including MPhil in Biotechnology, Genetics, Microbiology, Pharmacology and Ph.D. programs in the health and allied sciences.

Furthermore, the flagship MBBS program is offered through Dow International Medical College, catering to international students or overseas sponsored students. The CPSP has also accredited the institution for FCPS training in 29 different specialties. The University has 17 Schools/Colleges and Institutes, including 9 clinical entities, and 25 other non-academic, administrative departments.

COLLEGES INSTITUTES & SCHOOLS OF DUHS

S #	Name of Institute/Colleges & Schools of DUHS
1	Dow Medical College (DMC)
2	Dow Dental College (DDC)
3	Dow International Dental College (DIDC)
4	Dow International Medical College (DIMC)
5	Dr. Ishrat-ul-Ebad Institute of Oral Health Sciences (DIKIOHS)
6	Dow College of Pharmacy (DCOP)
7	Dow Institute of Physical Medicine & Rehabilitation (DIPM&R)
8	Dow Institute of Health Professionals Education (DIHPE)
9	Dow Institute of Radiology (DIR)
10	Dow Institute of Nursing & Midwifery (DION&M)
11	Institute of Business and Health Management (IBHM)
12	Dow Institute of Medical Technology (DIME)
13	School of Public Health (SPH)
14	Dow College of Biotechnology (DCOB)
15	School of Postgraduate Studies (SPGS) <ul style="list-style-type: none"> a. <i>Institute of Clinical Sciences</i> b. <i>Institute of Biomedical Sciences</i> c. <i>Institute of Health Sciences</i>
16	School of Dental Care Professionals (SDCP)
17	Institute of Biomedical Sciences (IBMS)
18	National Institute of Diabetes & Endocrinology (NIDE)
Clinical Departments of DUHS	
1.	Dow University Hospital <ul style="list-style-type: none"> a. <i>Dow Institute of Cardiology</i> b. <i>National Institute of Liver & GI Diseases (NILGID)</i> c. <i>National Institute of Diabetes & Endocrinology (NIDE)</i> d. <i>National Institute of Solid Organ & Tissue Transplant (NISOTT)</i>

2.	Dow Institute of Radiology
3.	Dow Diagnostic, Research and Reference Laboratory (DDRRL)
4.	OJHA Institute of Chest Diseases (OICD)
6.	Dr. Ishrat UI Ebad Khan Location (near LNH), National Stadium Road
7.	Dr. Ishrat UI Ebad Khan Institute of Blood Diseases (DIKIBD)
8.	DHA City Medical Center
Other Non-Academic, Research Core and Administrative Entities	
1.	Day Care Centers
2.	Library
3.	Finance Directorate <i>a. Financial Aid Office</i> <i>b. CMS Fee section</i>
4.	Registrar Secretariat
5.	Clinical Trials Unit (CTU)
6.	Internal Audit Directorate
7.	Dow Institute for Advanced Biological & Animal Research
8.	Examination Department
9.	Question Bank (Q Bank)
10.	Admissions Department
11.	Student Facilitation Centers
12.	Quality Enhancement Cell (QEC)
13.	Directorate of Human Resource
14.	Professional Development Center (PDC)
15.	Planning and Development Directorate
16.	Dow Premium Health Water- Riva Water
17.	Office of Student Counseling and Advising
18.	Office of Alumni Affairs and Resource Mobilization
19.	Office of Research Innovation & Commercialization (ORIC)
20.	Office of Strategic Development and Implementation (OSDI)
21.	Office of Graduate Placement and Student Exchange Program

22.	Directorate of Information & Communication Technology (ICT) <i>a. Campus Management Solution (CMS)</i> <i>b. Digital Libraries (Multiple Departmental Libraries) of DUHS</i>
23.	Institute of Biological, Biochemical and Pharmaceutical Sciences
24.	Procurement Directorate (Office of Procurement and Supply Chain)
25.	Dow Research Institute of Biotechnology & Biomedical Sciences (DRIBBS)
26.	Dow Skills Development Center (DSDC)

BRIEF PROFILES OF INSTITUTES, COLLEGES & SCHOOLS

i. Dow Medical College (DMC)

Dow Medical College (DMC) is one of the oldest medical colleges in Sindh. Established in 1945, it has a rich history and has been involved in the teaching and training of medical students since the establishment of the college. For more than 60 years, the college has had approximately seventeen thousand alumni, who are serving with distinction globally. It is attached to Dr. Ruth Phau Civil Hospital Karachi, Pakistan's largest teaching hospital with departments of all major specialties, and more than 2000 bed occupancy.

The five years course has been divided into 10 semesters. A new system of integrated teaching consisting of applied knowledge has been introduced, in which the students are taught basic subjects in the usual manner, which is later on followed by clinically oriented teaching sessions to explain the clinical application of the basic knowledge spiral after spiral, with enhanced integration of concepts.

ii. Dow International Medical College (DIMC)

Dow International Medical College was established in 2007 in order to facilitate children of overseas Pakistanis as they face various difficulties in entering into the medical profession abroad. It is a PMC recognized medical college that has been recognized internationally, and included in the INTERNATIONAL MEDICAL EDUCATION DIRECTORY (IMED), with approval from the Educational Commission for Foreign Medical Graduates. The laboratories of the college are fully equipped with the latest equipment, including power labs, lecture halls, tutorial rooms and other basic facilities. A state of the art gymnasium and sports and recreational complex also hosts extra-curricular activities for the students. Separate hostels for boys and girls are available, along within the same campus with a regularly monitored security system. Clinical training for the MBBS program of DIMC is provided in the 650-bedded Dow University Hospital, located within the vicinity of the same campus.

iii. Dow College of Pharmacy (DCOP)

Dow College of Pharmacy (DCOP) was established in 2007, and it is recognized and accredited by the Pharmacy Council of Pakistan. Dow College of Pharmacy provides pharmacy education to its students, offering graduate and post-graduate degree programs in the field of pharmacy:

- I. Pharm D (Morning and Evening) - A five years Program for a degree of Doctor of Pharmacy.*
- II. Master of Philosophy in all disciplines, as approved by the Pakistan Pharmacy Council.*
- III. Ph.D. Pharmacology*

Dow College of pharmacy is a leading institute in training allied healthcare professionals who are able to conduct innovative research, provide quality pharmaceutical care and consultancies, along with being at the forefront in formulating pharmaceutical products.

The college is well equipped with audiovisual enabled lecture halls, fully equipped laboratories for Pharmaceutics, Pharmacology, Pharmaceutical Chemistry, Pharmacognosy, Industrial Pharmacy, Quality Assurance, Instrumentation, Anatomy, Physiology and Pathology, Microbiology.

iv. Dow International Dental College (DIDC)

Dow International Dental College (DIDC) was initially established at OJHA Campus. Later it was relocated to Chanesar Goth (Defence Campus) to meet the shortage of Dental Surgeons in Pakistan as well as abroad. DIDC offers admissions mainly to overseas students, however due to the acute deficiency of Dental Surgeons; the option for admission is also given to local students.

The Pakistan Medical Commission (PMC) recognized this college in 2011 for Students in Dentistry Program (BDS). This college is fully equipped with most modern facilities including Digital library, Museum, Lecture halls, Tutorial Rooms and Laboratories.

v. Dow Dental College (DDC)

Dow Dental College (DDC) was established in November 2012 at Dow Medical College (DMC). The College's new building was inaugurated in April 2018 and is under consideration for recognition and registration with PMDC for BDS (4 year) program.

DDC is working to prepare competent and professional dentists in the existing oral health care educational and patient management system in Pakistan and outside the country with a focus to serve community and research and to develop academic excellence and to deliver the utmost quality of scientifically proven preventive, educational and therapeutic services to the community.

This college and its dental hospital are fully equipped with most modern equipment in the laboratories along with simulators to teach clinical procedures at preclinical & clinical level. It has highly qualified and experienced faculty who carry out all dental procedures ranging from simple diagnostic procedures to extractions and implant placements.

vi. Dow Institute of Nursing & Midwifery (DION&M)

Institute of Nursing was established in June, 2006 with the help of Higher Education Commission (HEC) Pakistan. It is envisioned to promote nursing education in Pakistan, preparing the leaders in nursing and producing a sufficient number of highly skilled and trained nursing professionals who can meet the challenges of modern preventive and curative healthcare.

The Institute of Nursing has a state-of-art building and all the modern facilities of teaching and learning. Both undergraduate and postgraduate programs are offered at the Institute of Nursing. For nearly 15 years, the Institute has helped prepare qualified professional nurses to work as highly skilled nursing staff, competent teachers and leaders in public and private health care sectors.

The Institute of Nursing represents a strong and extraordinary community of excellent students, well trained faculty, dedicated staff, and supportive alumni.

All programs, which are offered at the Institute of Nursing are accredited by the Pakistan Nursing Council (PNC) and Higher Education Commission (HEC), Pakistan.

vii. Dr. Ishrat-ul-Ebad Khan Institute of Oral Health Sciences (DIKIOHS)

Dr. Ishrat ul Ebad Khan Institute of Oral Health Sciences (DIKIOHS) is offering the following programs:

- Bachelor in Dental Surgery (BDS)*
- Bachelor in Dental Care Professionals (DCP)*
- Masters in Dental Surgery (MDS)*
- Masters in Sciences (MSc)*

The Dental College for imparting under-graduate dental education leading to the degree of Bachelor of Dental Surgery (BDS), fulfilling the requirements of the Pakistan Medical Commission (PMC). Training in all Basic and Clinical Dental sciences, and Community Dental Health is provided under the Semester System. Currently there are departments of Oral & Maxillofacial Surgery, Prosthodontics, Oral Pathology & Oral Microbiology, Oral Medicine, Periodontology, Oral Biology and Tooth Morphology, Sciences of Dental Materials, and Community Dentistry. The attached Dental Hospital with 125 dental chairs has Nine Out-patient Departments, namely Oral Diagnosis, Oral Surgery, Oral Medicine, Oral Radiology, Periodontology, Prosthodontics, Crown & Bridge, Orthodontics and Operative Dentistry, Procedures including extraction of teeth, filling, root canal, capping and emergency oral treatment is offered.

The clinical work at the hospital is augmented by best practices, good sterilization protocols and required gadgetry. All its departments are provided with material and equipment, which are further provided to patients at minimum cost. At the Post Graduate Training and Research Center of DIKIOHS, fellowship (FCPS) Part II training is underway at the Departments of Orthodontics, Prosthodontics, and Oral Surgery, after being recognized by College of Physicians & Surgeon (CPSP).

viii. Institute of Business and Health Management (IBHM)

Institute of Business and Health Management is a constituent part of Dow University of Health Sciences and was established in 2007 to offer programs in Healthcare Management. The institute was established with the aim of creating an environment that facilitates learning and innovation, to bridge the gap between academia and the healthcare industry, and to provide quality management graduates to contribute to the healthcare workforce. In order to meet objectives of providing quality health managers, IBHM is offering programs at the undergraduate level, with a Bachelors of Business Administration- BBA, along with a Masters of Business Administration - MBA (Regular) & Executive Masters of Business Administration- (EMBA).

ix. Institute of Medical Technology (IMT)

Medical Technologists are recognized globally as important and essential members of the health care team, not only for routine medical and surgical care but also for emergency medicine, critical care and management of disaster victims. The Institute of Medical Technology of Dow University was established for Human resource development in these key areas, with a four years' degree program in the following specialties:

- *Clinical Pathology*
- *Critical Care Technology*
- *Operation Theater Technology*
- *Ophthalmology*
- *Perfusion Sciences*

It has eight semesters over four years and comprises a core course where training is imparted in Basic Computer Skills, English proficiency, Behavioral Sciences, Research Methodology and Fundamentals of Basic Medical Sciences. The Institute has its own state of the art Skills Laboratory and a 26 station Digital library with Internet and PERN connectivity. Practical classes are held in well-equipped Science laboratories.

Additional training programs at Institute of Medical Technology include:

- *Adult Echocardiography / vascular technician course*
- *Cardiac technologist training program*
- *Electrocardiography training program*
- *Technician courses for ultrasound, radiography, CT scan and MRI*

x. Dow Institute of Physical Medicine and Rehabilitation (IPM&R)

Institute of Physical Medicine and Rehabilitation was established in August 2007 and later shifted to the OJHA Campus in 2020, in order to make a difference in the lives of people with disabilities through multidisciplinary rehabilitative care to restore fullest possible, physical, mental, social and economic independence. It is one of the only civilian facilities in Pakistan providing such multi-disciplinary rehabilitative care.

IPM&R is committed to provide comprehensive multidisciplinary rehabilitation services and evidence-based practice to help the patients return to an active and healthy lifestyle. IPM&R is dedicated to being an internationally significant rehabilitation institute in the promotion, development and dissemination of research and education in the science of Rehabilitation through its activities and partnerships with internal and external communities.

xi. School of Postgraduate Studies (SPGS)

Postgraduate education in Dow University of Health Sciences is conducted under the overall supervision of the School of Postgraduate Studies. The University bodies such as the Board of Advanced Studies and Research, Institutional (ethical) Review Board and Scientific Committee facilitates monitoring both the research activity and the overall programs.

Dow University conducts 35 Ph.D., Masters, Fellowship, Diploma and Certificate programs. Each year around 150 FCPS students complete training at Dow University of Health Sciences. Till date, more than 400 candidates have passed M.Phil. MDS, MSBE, MS diabetes, MS Physiotherapy and obtained MBAs from Dow University of Health Sciences.

xii. Institute of Biomedical Sciences (IBMS)

Institute of Basic Medical Sciences (IBMS) has been established for M.Phil. And PhD courses in Basic Sciences i.e. Anatomy, Physiology, Biochemistry, Pathology, Microbiology and Pharmacology to develop human resources. It is a part of the medical research city at OJHA Campus. The building has spacious air-conditioned lecture halls and seminar rooms having necessary audiovisual multimedia facilities.

The contemporary techniques involved in basic sciences research activities are conducted in the labs of different departments, which are well equipped with modern equipment for a variety of anatomical, physiological, biochemical, hematological, pathological, pharmacological, immunological and molecular biological experiments for specific research. The curriculum has been designed with a multidisciplinary approach, focusing at molecular and cellular level. In addition, core and supportive courses provide competencies in research Biostatistics, critical analysis, and interpersonal communication. This institute is helping in bridging the deficiency gap of Basic Medical Sciences research in Pakistan.

xiii. School of Public Health (SPH)

Public Health is an important component of health services that is often ignored in the developing world and highly emphasized in the developed world. Keeping in view the needs of the Pakistani population, the DUHS took this initiative to establish the first public health school in a public sector university of Sindh Province.

Dow University of Health Sciences established the School of Public Health (SPH) at OJHA campus in 2012. The aim of this school is to improve the health of our population by addressing the major health issues. The programs at SPH include Master of Public Health, Master of Sciences (Biostatistics and Epidemiology), and Master of Sciences in Public Health. The Pakistan Medical Commission (PMC) has approved all of these programs.

The faculty and students of SPH are also conducting community based research and health activities. The SPH has various sections to focus separately such as epidemiology division (examining communicable and non-communicable diseases in Pakistani population), nutrition division (studying the role of nutrition in disease development and prognosis) and economic and policy group (examining the impact of economic indicators on health of Pakistani population and health policy).

xiv. National Institute of Diabetes and Endocrinology (NIDE)

It was established in 2006. It provides consultation and counseling of patients suffering from Diabetes and other Endocrine diseases. This institute is offering a two-year Master's program in Diabetes & Endocrinology. This institute is also conducting public awareness programs regularly as the prevalence of diabetes and endocrine diseases are on the rise in Pakistan, in

particular Sindh. This institute also has facilities for management and treatment of eye complications of diabetes through its Eye Care Center, which offers the patients:

- Complete Eye Examinations
- Screening for Diabetic Retinopathy
- Fundus Fluorescein Angiography
- Laser photocoagulation

More than 5000 patients have been registered. A comprehensive facility for diabetic diet consultation, foot care, early diagnosis and treatment-based facilities for other endocrine diseases, especially thyroid diseases, growth disorders and obesity, is also offered to the patients.

xv. Dow Institute of Radiology

The Dow Radiology Complex was established in 2008 to have the highest quality medical imaging, research opportunities, and Radiology educational experiences. Besides providing economic benefits to the patients, the department of Imaging Services is committed to be at the forefront of new developments and clinical applications in the rapidly changing field of medical imaging.

Services include the provision of all modern diagnostic facilities such as

- X-ray
- Ultrasound Grayscale and color Doppler machines
- Fluoroscopy
- DEXA Scan
- Echocardiography
- Mammography and breast interventions
- CT Scan 128 and 16 slicers
- MRI open magnets and 1.5 magnets
- VIR vascular and interventional radiology.
- OPG

Considering the growing demands of patients, a City Campus on Stadium Road has been established, named as 'Dow LEJ Campus' and it provides facilities of CT & MRI also, 24 hours a day. Malir Chest Clinic, Naziabad Chest Clinic and DHA City Center were also established to facilitate the society. Highly qualified and experienced faculty, staff, and technologists perform all the teachings and services at Dow Institute of Radiology.

xvi. Dow Institute of Health Professionals Education (DIHPE)

The Dow Institute of Health Professionals Education (DIHPE) is the first health professional education Institute of the country. The basic idea behind its establishment is to restructure, organize and optimize the existing professional education activities of the region.

The foundation of Dow Institute of Medical Education is based on the four pillars of Medical Education: Teaching & Learning, Principles of Assessment, Curriculum Development &

Innovation and Research. Additionally, we oversee the conduct of various types of Continuing Professional Development short courses ranging from one-day to five-day courses, and even six months Certificate course (CHPE) that is compulsory for the all the faculty members of Dow University of Health Sciences (DUHS). The Institute is offering Masters in Health Professions Education Program (MHPE) since 2009. This Program is the first MHPE program of the country. The graduates are currently serving on key posts in the renowned universities of the country as well as in different parts of the world.

The Dow Institute of Health Professional Education (DIPHE) is acting as a nucleus for DUHS in teaching, scholarship, development and evaluation of educational programs through service provision, research and innovation. The scope of its activities includes postgraduate education, continuing professional development and continuing medical education.

xvii. Dow College of Biotechnology (DCOB)

The Dow College of Biotechnology is located in the graceful building of Dow International Medical College, OJHA Campus. Currently, a four-year BS Biotechnology program is offered through Dow College of Biotechnology. The College has an excellent teaching faculty, consisting of foreign and nationally qualified PhD students. Scientists, who are extensively involved in research activities and hence are well aware of the recent developments in the field of sciences.

Teaching methodology at Dow College of biotechnology is a well-planned blend of theory and practical skills learned in laboratories; therefore, this program is for students who have a passion for becoming scientists. For those students, Dow College of Biotechnology can provide an excellent platform. The college offers the students diverse experiences and expertise, consisting of a quality educational environment that emphasizes learning through integration of theory with practical laboratory and field studies. Our program offers the students the opportunity to work on research projects that provide valuable insight and impact people's lives.

xviii. School of Dental Care Professional (SDCP)

School of Dental Care Professionals of Dow University aims to produce Dental Technologists, Hygienists and other Dental Auxiliaries to meet the demands of new and more sophisticated Dental Care system in Pakistan, in addition to providing a trained workforce to an ever-increasing need for qualified Para-medical staff.



DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

DUHS

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CHAPTER 1

Academic Activities

1.1. UNDERGRADUATE & POSTGRADUATE PROGRAMS

UNDERGRADUATE PROGRAMS:

1. Bachelor of Medicine & Bachelor of Surgery (MBBS)
2. Bachelor in Dental Surgery (BDS)
3. Doctor of Physiotherapy (DPT)
4. Doctor of Pharmacy (Pharm-D)
5. BS Optometry
6. Bachelor of Science in Radiologic Technology (BSRT)
7. Post RN BS Nursing (Post RN BSN)
8. Post RN BS Midwifery (Post RN BSM)
9. BS Biotechnology
10. BS Nursing (BSN)
11. BS Nutritional Sciences
12. BS Medical Technology (BSMT)
13. Bachelors of Business Administration (BBA)
14. BS in Dental Care Professional (DCP) Dental Hygiene
15. BS in Dental Care Professional (DCP) Dental Technology

POSTGRADUATE PROGRAMS:

1. Masters In Dental Surgery (MDS-Basic & Clinical)
A 4-Years Program in the following Specialties of **Basic Sciences**
 - I. Dental Materials
 - II. Oral Pathology
 - III. Community Dentistry
 - IV. Oral BiologyA 4-Years Program in the following Specialties of **Clinical Sciences**
 - I. Operative Dentistry
 - II. Oral Surgery
 - III. Prosthodontics
 - IV. Orthodontics
2. Masters In Sciences Dental Surgery (MSc. DS -Basic & Clinical)
A 2 year program in the following specialties of **Basic Sciences**
 - I. Community Dentistry
 - II. Dental Materials
 - III. Oral Biology
 - IV. Oral PathologyA 2-year program in the following specialties of **Clinical Sciences**
 - I. Operative Dentistry
 - II. Prosthodontics
 - III. Periodontics

- IV. Oral Medicine
- V. Oral & maxillofacial Surgery

- 3. Masters in Biostatistics and Epidemiology (MSBE)
- 4. Masters in Health Professionals Education (MHPE)
- 5. Masters in Advanced Physiotherapy (MSAPT)
- 6. Masters In Nursing (MSN)
- 7. Masters in Public Health (MPH)
- 8. Masters of Business Administration (MBA)
- 9. Executive Masters of Business Administration (EMBA)
- 10. Master of Science in Public Health (MSPH)
- 11. MSc. in Diabetes & Endocrinology (MSc. D&E)

12. Clinical Diploma Programs

- I. Diploma in Anesthesiology (DA)
- II. Diploma in Ophthalmology (DO)
- III. Diploma in Psychiatric Medicine (DPM)
- IV. Diploma in Laryngo Otorhinology (DLO)
- V. Diploma in Family Medicine (DFM)
- VI. Diploma in Medical Jurisprudence (DMJ)
- VII. Diploma in Cardiology (Dip-Card)
- VIII. Diploma in Critical Care Medicine (DCCM)
- IX. Diploma in Child Health (DCH)
- X. Diploma in Dermatology (D-DERM)
- XI. Diploma in Radiology (DMRD)
- XII. Diploma in Tuberculosis & Chest Diseases (DTCD)

FCPS-II

Fellowship training (4-Years Program), Degree awarded by CPSP

Fellowship Training Programs		
ENT	Medicine	Radiology
Pediatrics	Psychiatry	Orthodontics
Gynecology	Orthopedic	Anesthesiology
Surgery	Pulmonology	Ophthalmology
Oral Surgery	Dermatology	Operative Dentistry
Neurology	Prosthodontics	Community Medicine
Cardiology	Cardiac Surgery	Physical Medicine and Rehabilitation

MS/MD- Masters of Surgery & Doctor of Medicine Program

Doctor of Medicine Program Specialties (4-5 years programs)

Doctor of Medicine Program Specialties	
Family Medicine	Anesthesiology
Neurology	Cardiology
Psychiatry	Emergency Medicine
Radiology	Critical Care Medicine
Dermatology	Pulmonology

Master of Surgery Program Specialties

Master of Surgery Program Specialties				
ENT	Plastic Surgery	Orthopedics Surgery	Cardiac Surgery	Neurosurgery

1.2. MS/M.PHIL. AND PH.D. PROGRAMS

M. Phil in Basic Sciences offered in the following specialties:

Anatomy	Bio-Technology	Hematology
Physiology	Histopathology	Molecular Pathology
Biochemistry	Medical Genetics	Pharmacology
Microbiology	MPhil in Pharmaceutical Sciences in the specialty of Pharmacology, Pharmaceutics, Pharmacy Practice	

- **Ph.D. program (sub-specialty wise)** with current active enrollment in:

Anatomy	Pharmacology	Chemical Pathology
Physiology	Public Health	Community Dentistry
Neurosciences	Medicine	Operative Dentistry
Oral Biology	Histopathology	Gynae & Obs
Oral Surgery	Oral Pathology	Medical Microbiology

- Ph.D. programs advertised (HEC approved & Accreditation Council approved programs) in 2021-2022

Ph.D. programs advertised in the Academic Session 2020	
Biotechnology	Genetics
Microbiology	Biochemistry
Pharmacology	Public Health
Physiology	

1.3. ACADEMIC ACHIEVEMENTS

Dow Institute of Nursing & Midwifery

Skills Lab Visit for Master Trainer Workshop - 26th May 2022

The Office of the Controller of Nurses Examination Board requested for the arrangement of a visit to the skills lab of DIONAM on 26th May, 2022 for the Master trainer workshop regarding the Certification Course of Nurse Education in Sindh Province. 24 participants visited DIONAM on 26th May, 2022 from 14:00 till 16:00 with the mediator of the World Health Organization Mr. Abdul Manan.

The visit commenced with a welcome note by Principal and Acting Director of DIONAM, Ms. Rubina Hafeez. It was followed by a brief review regarding Labs on multimedia by Skills Lab In charge, Ms. Dorothy. Participants visited Anatomy Lab along with their mentors and members of DIONAM. Ms. Asma Javeed explained about the rules and policies regarding lab and participants' questions were answered as well. Skill Lab was also visited where Ms. Naheed and Ms. Dorothy showed them the demonstration area and clarified the details regarding Skill Lab protocols.





Skills Lab Visit for Aga Khan University Faculty Members – 2nd June, 2022

On 2nd June 2022, AKUH faculty member Ms. Yasmin Parpio accompanied three instructors from Rawalpindi visited at Skills Lab DION&M. The faculty members were briefed regarding the Skills Lab including equipment, rules and policies.



Program Orientation and Awareness session on HIV and TB – 3rd June, 2022

In order to give our Post RN BSN students of Advance concept of Community Health Nursing, the insight of some Vertical programs we had invited CDC_HIV/AIDS and CDC_TB program team at DIONAM for an indoor session and it proved to be really effective in bridging the gap

between the theoretical and practical aspect of community health programs. This Program orientation and awareness session was held on Friday, 3rd June, 2022 at 9am till 11.30am in Lecture hall # 2, DIONAM. It was a privilege for our Institute to facilitate speakers like,

- Dr. Ghawaskar, Additional Director CDC (HIV/AIDS), Karachi Sindh.
- Dr. Saima, Provincial Coordinator, Karachi, Sindh.
- Dr. Sameera, ART Physician HIV, Civil Hospital, Karachi.
- Dr. Muhammad Rashid, Provincial Program Officer, Karachi, Sindh
- Miss Misbah Awan, Community Based Organization Manager, Karachi, Sindh.

The session started at 9am with Dr. Sameera, who emphasized on the Anti-Retroviral Therapy for the HIV positive patients and shared some valuable information regarding the prophylactic treatment for HIV related needlestick injuries among nursing staff. Later Dr. M. Rashid shared a detailed session on TB awareness and program scope and latest advancement and the upcoming issues and resistance of TB drugs. Later Dr. Ghawaskar and Dr. Saima gave the program orientation and highlighted the scope and array of the program progress in the community. The session ended timely and, in the end, Acting Director/Principal Ms. Rubina Hafeez along with Post RN BSN program Coordinator Mr. Nadeem Uddin gave the Bouquets, Shields and Certificates of appreciation to the respected Guest speakers.



1.3.1. RESEARCH ACHIEVEMENTS

School of Public Health

May 2022: Food and Health Foundation, USA funded Project on Mental Health Capacity Building for Primary healthcare providers to promote good health & wellbeing

People with mental health conditions often face severe human right violation, discrimination, and stigma particularly in developing countries. Lack of acceptance makes it difficult for such individuals to share their mental health issues with their family or friends out of the fear of being judged or worse disowned. Pakistan suffers from a large treatment gap with a handful of institutions and professionals providing appropriate treatment. Integrating mental health services within routine primary health care clinics has been recommended as one solution to increase the accessibility of mental health care in low-resource settings. The research initiative is designed to ensure awareness about mental illnesses and building capacity of the primary

healthcare workers in Pakistan. The project is funded by Food and Health Foundation, USA with an approved budget of \$20,000.

May 2022: National Institute of Health, Islamabad funded project on Development of Gestational Diabetes Mellitus (GDM) Management App for Pakistani Pregnant Women: A Randomized Control trial to evaluate the impact of App use on maternal health and pregnancy outcomes.

Principal Investigator Prof Kashif Shafique and his research team aims to investigate the impact of App use on maternal health and pregnancy outcomes in addition to standard care. Given the high potential of mobile apps for GDM management and the lack of evidence on the efficacy of different app features, this project is intended as a constructive step in the design and development of a mobile app to support GDM management. The project is funded by the National Institute of Health, Islamabad.

May 2022: NATIONAL RESEARCH PROGRAM FOR UNIVERSITIES (NRPU) funded project on Use of Digital Technology for improving Emergency Medical Services to develop mobile apps for Road Awareness and early response to Road Traffic Accidents

Dr. Muhammad Zafar Iqbal Hydrie, Professor of Public Health at SPH has secured HEC funding on a project titled, "Use of Digital Technology for improving Emergency Medical Services to develop mobile apps for Road Awareness and early response to Road Traffic Accidents." This project will explore how to develop an effective working road traffic accident surveillance system and set it up cheaply with sustainable resources in an urban setting in a low to middle income country such as Pakistan by public-private partnerships.

April 2022: Higher Education Commission Sindh funded project on Metabolic Syndrome and Risk of Cardiovascular Diseases in Apparently Healthy Subset of Pakistani Adult Population.

The goal of this research project is to estimate the prevalence of metabolic syndrome among apparently healthy adults and to raise awareness about metabolic syndrome and risk of cardiovascular diseases. Under this project with research award of PKR 1925000 from HEC Sindh grant fund, the Principal investigator Prof. Kashif Shafique and his research team is intended to set up various medical camps to assess for metabolic syndrome in healthy appearing adults up for screening. The participants are provided with free physical examination and free vouchers for diagnostic laboratory tests. All self-reported chronic conditions will be further assessed by physical examination, medical history of the participants and laboratory findings.

April 2022: NATIONAL RESEARCH PROGRAM FOR UNIVERSITIES (NRPU) funded project on Development of Biological Control Approaches Using Epiphytic Yeast to Maintain Postharvest Quality and Control Fruit Rot of Mango, Citrus & Tomato.

Increasing concerns toward food safety and public health have rendered the use of synthetic chemicals in agricultural environments unacceptable. A shift toward biologically safe approaches has been considered a preferred strategy within the food handling chain and has received increasing attention over the past years in managing undesirable microbial growth.

Principal Investigator Dr. Habiba Shah, Asst. Prof at SPH has secured HEC funding of 9520500 PKR on a project titled, “Development of biological control approaches using epiphytic yeast to maintain postharvest quality and control fruit rot of mango, citrus & tomato.”

1.4. FOREIGN ACADEMIC LINKAGES

For the year 2021-22, academic linkages were continued or established with the foreign medical boards/associations/universities, including the following:

1.	University of Manchester, United Kingdom
2.	Stem Cell Medical University, California, USA
3.	Vanderbilt University, USA
4.	Reliance Medical Clinics, PLLC - Medical Student Exchange, USA
5.	Duke University Health System, Inc. & University of New Mexico, UK
6.	DOGAN (Dow Graduate Association of North America)
7.	AMRCB for Accreditation Fee
8.	University Sultan Zainal Abidin, Malaysia
9.	University of Maryland Medical Centre (UMMC), USA
10.	International Committee of the Red Cross (ICRC), Geneva, Switzerland
11.	Florida International University - Herbert Wertheim College of Medicine (FIU-COM)
12.	The University of Huddersfield
13.	Queen Mary University of London
14.	The University of Manitoba
15.	Chapman University, USA,
16.	The Karaganda Medical University (Republic of Kazakhstan)

Age Care Technologies (UK)

A multidisciplinary research group under broad categorization of education, research, and service on bone and mineral diseases has been developed at the School of Public Health (SPH) Dow University of Health Sciences (DUHS) in collaboration with Foundation of Age Care Technologies, founded by Dr Ian Philip. Professor Philip is an advisor to the World Health Organization (WHO) in person-centered care for older patients. He holds a Doctorate in Medicine from the University of Edinburgh and was a practicing physician for 35 years in the UK National Health Service, spending eight years as an Executive Medical Director. As part of this academic collaboration four of our MPH students are currently doing their research studies using ACT assessment tools in the older population residing in Karachi, Pakistan. Every student has a distinct research objective for their Research Project as part of their MPH research. Under this collaboration various research international grant proposals have also been initiated.

Department of Computer Sciences, Karachi University (UBIT)

The PI, Dr. Muhammad Zafar Iqbal Hydrie has interest in Prevention and Intervention strategies in NCDs and supervised a published project on the burden and pattern of RTA victims coming to a tertiary center in Karachi. With recent advancements in mobile apps technology he realized the potential to integrate this technology with RTA surveillance and along with Dr. Nadeem Mahmood who is the Chairman of Department of Computer Science (UBIT), University of Karachi and has research interest with papers on use of digital technologies in healthcare, both of these are working on a HEC project to develop a mobile app and pilot it in Karachi. In this grant application they have plan to implement this app across Pakistan with our collaborators in selected cities across each province. Starting in Sindh, along with DUHS there are 2 more academic collaborators, one at Liaquat University of Medical & Health Sciences (LUMHS) in Jamshoro and another collaborator at Department of Public Health, Faculty of Life Sciences, Shaheed Zulfikar Ali Bhutto Institute of Science and Technology [SZABIST] in Karachi. Simultaneously in Baluchistan, our collaborator at the Civil Provincial Hospital (CPH) in Quetta along with the Medical Director will coordinate the activities in Quetta and its surroundings. In Punjab, our academic collaborator at the Department of Public Health, University of Health Sciences in Lahore will be looking at the project across the province. University of Health Sciences has many teaching hospitals and medical colleges affiliated with it across Punjab and it will play a key role in linking the selected cities across Punjab. Finally in Khyber Pakhtunkhwa (KPK), we are honored to have the Vice Chancellor of Khyber Medical University in Peshawar as our collaborator. He is the Professor and Dean of Public Health & Social Sciences, Khyber Medical University, have worked on Injury prevention projects, and will be well placed to spearhead our project across KPK from Peshawar into the province. They also have plans to provide first aid training workshops to increase volunteers who know CPR.

1.5. HONORS AND AWARDS

- 18 new research project grants were newly acquired in 2021-2022 with funding of 140,072,337 Rupees from local, national and international research funding agencies.
- The research in recognized and peer reviewed publications for the years 2021 and 2022 are **438**.
- 22 new research projects under the Vice Chancellors Seed Funding Initiative (VCSFI) were approved with funding of Rs. 14,239,600.

The following research grants were awarded to the faculty of Dow College of Biotechnology.

1. "Development of Pilot Scale System for Phycoremediation of Textile Effluent with Concomitant Production of Algal Biomass". Awarded by HEC under National Research Program for Universities. Grant No: 20-16273/NRPU/R&D/HEC/2021 2021. (7.90 million PKR-2Yr-Dated:16-06-2022).
2. "Development of Raloxifene-Loaded Self-Nanoemulsifying Drug Delivery System (SNEDDS) with Enhanced Bioavailability Potential: A Therapeutic Implication in Osteoporosis". Awarded by HEC under National Research Program for Universities. Grant No: 20-15102/NRPU/R&D/HEC/2021 2021. (6.129 million PKR-2 Yr-Dated:17-11-2021).

3. "Error Rate and Coefficients Quantification of Neurological Defects due to Consanguineous Mating using *Drosophila melanogaster* Model ". Funded by Vice Chancellors' Seed Funding Initiative-2021(VCSFI-2021), Dow University of Health Sciences, Karachi-Pakistan. Grant No: DUHS/VC/2021/11-61 (0.25 million PKR-1Yr-Dated: 19-09-2021).
4. "Development of *Drosophila melanogaster*-Based Assay System for Screening of Carcinogenic Compounds' '. Funded by Vice Chancellors' Seed Funding Initiative-2021(VCSFI-2021), Dow University of Health Sciences, Karachi-Pakistan. Grant No: DUHS/VC/2021/11-61 (0.25 million PKR-1Yr-Dated: 19-09-2021).
5. "Isolation, Purification and Characterization of Bioactive and Anti-cancerous Small Molecules from *Oxalis corniculata*". Funded by Vice Chancellors' Seed Funding Initiative-2021(VCSFI-2021), Dow University of Health Sciences, Karachi-Pakistan. Grant No: DUHS/VC/2021/11-61 (0.98 million PKR-2Yr-Dated: 19-09-2021).
6. "Osteoinductive Potential of Selenium Nanoparticles via Regulation of Oxidative Stress in Human Umbilical Cord Derived-Mesenchymal Stem Cells: A Promising Therapeutic Approach in Bone Disorders". Funded by Vice Chancellors' Seed Funding Initiative (VCSFI-2021), Dow University of Health Sciences, Karachi-Pakistan. Grant No: DUHS/VC/2021/11-61 (1 million PKR-2Yr-Dated: 19-09-2021).
7. "*In-vitro* Propagation and Enhanced Cannabinoids Production of *Cannabis Sativa* L. (Industrial Hemp)". Funded by the Vice Chancellor's Seed Funding Initiative-2021 (VCSFI-2021), Dow University of Health Sciences, Karachi Pakistan. Grant No: DUHS/VC/2021 /11-61 (1 million PKR-2Yr-Dated: 19-09-2021).

1.6. INSTITUTIONAL LINKAGES

We are linked with the following organizations:

S #	Name	Key Initiatives to be Undertaken	Field	Scope of Collaboration	Duration	Linkage Establishment Date
1.	Hashmanis Group of Hospitals	FCPS Trainees of Ophthalmologists	Ophthalmology	Academic	2 Years	12th Apr, 2022
2.	KOHAT University	To establish an academic link between DUHS and KUST	Academia	Academic	1 Year	26 th Aug, 2021
3.	Salim Habib University	Strengthen and promote academic-industry relationship	Biomedical Engineering	Academic	5 Years	28th Oct, 2021
4.	IBA-Center of Executive Education	To establish mutual collaboration between the IBHM, DUHS and CEE, IBA	Healthcare Management	Academic	3 Years	11th Aug, 2021
5.	Aga Khan University	Rotation of postgraduate trainees at DUHS	Trainees placement	Academic	1 Year	17th Jun, 2021

Institutional Linkages	
1.	Martin Dow Limited
2.	Patel Hospital, Karachi
3.	Karachi Adventist Hospital
4.	Tabba Heart Institute, Karachi
5.	Darul-Sehat Hospital, Karachi
6.	Aga Khan University, Karachi
7.	Institute of Business Administration (IBA, Karachi)
8.	Chandka Medical College, Larkana
9.	Jinnah Postgraduate Medical Center, Karachi
10.	Ghulam Muhammad Mehr Medical College, Sukkur
11.	Pakistan Standard Quality Control Authority (PSQCA)
12.	Pakistan Council for Scientific And Industrial Research (PCSIR)
13.	Educational Commission for Foreign Medical Graduates (ECFMG)
14.	Executive Membership from Sindh Province In Scaling Up Nutrition Academia & Research (SUNAR)
15.	Post-Graduation Diploma & training programs of PIQC Institute of Quality
16.	Foundation for the Advancement of International Medical Education and Research (FAIMER)
17.	Defense Science And Technology Organization (DESTO), Pakistan
18.	Toastmasters Club International
19.	Institute Of Leadership Excellence (ILE)
20.	Dr. Ruth Pfau Civil Hospital, Karachi
21.	Indus Hospital Karachi
22.	Alumeed Rehabilitation Center
23.	University of Kohaat
24.	Indus Pharma
25.	Pakistan Pharmaceutical Manufacturers Association, PPMA
26.	Institute of Leadership
27.	Institute of Financial Markets of Pakistan (IFMP) IFMP
28.	Shaheed Benazir Bhutto Women University (SBBWU), Peshawar
29.	Centre of Proteomics, University of Karachi

30. Institute of Sustainable Halophyte Utilization, University of Karachi,
31. ICCBS, University of Karachi
32. KIBGE, University of Karachi, Karachi
33. SZABIST
34. Jinnah University for Women
35. Universite de Lausanne Hospital Opthalmique Jules-Gonin Lausanne, Switzerland
36. Department of Pathology and Immunology PATIM, University of Geneva, Switzerland

37.National Institute of Diabetes & Endocrinology-DUHS collaborates with PES Pakistan Endocrine society. Students and faculty actively participate in the monthly PES meetings in collaboration with Aga Khan University, Baqai Institute of Diabetes and Endocrinology and Liaquat National Hospital.



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CHAPTER 2

Research and Development

As per guidelines of Higher Education Commission Pakistan, the Dow University of Health Sciences (DUHS) established the Office of Research, later renamed as the Office of Research, Innovation and Commercialization (ORIC), with the aim of establishing and now enhancing the research culture within the University.

The DUHS has research facilities and resources of international standards for students and faculty across all disciplines of the medical and biomedical sciences.

Objectives of Research and Development at DUHS:

The objectives of R & D are:

- a) To integrate a research culture at DUHS.
- b) To broaden the new knowledge generation and develop research capacity across all faculties of the university.
- c) To encourage faculty and students to conduct research and publish related findings.
- d) To enhance graduate research activities across all schools/colleges/institutes.
- e) To encourage faculty to disseminate teaching based on research knowledge.
- f) Commercialize research and development to subsidize research and academic activities within DUHS.

I. Key Functions:

COMMITTEES AND BOARDS

A. Scientific Research Committee

The Scientific Committee of the University is an advisory committee, which was constituted in November, 2012, with the approval of Board of Advanced Studies and Research of DUHS to facilitate the approvals of research proposals for Master's /equivalent degree students before the study is to commence. The committee guides the principal investigator and supervisor regarding any amendment or improvement that may be required before this study is submitted to the IRB.

Applicants are informed about the date, place, and time of the scientific committee meeting through email and phone calls. The proposal is discussed with the applicant in the light of reviewers and members' comments. If the proposal is accepted, then the approval letter is issued. In this committee, research proposals of postgraduate students are scientifically reviewed and advised on the modifications to the students.

B. Ph.D. Advisory Scientific Committee

The PhD Advisory Committee of the University is an advisory committee which has been constituted to facilitate the preparation of research proposals for the PhD students before the study commences. The committee guides the principal investigator and supervisor regarding any amendment or improvement that may be required before this study is submitted to the IRB. The committee comprises of indigenous experts from different fields. In this committee, research synopses of doctoral students are scientifically reviewed and advised on the modifications to the students.

C. Board of Advanced Studies and Research (BASR)

The Board of Advanced Studies & Research of the University supervises the Postgraduate education. All the official works related to this Board are administered and organized under the Research Department. The Board consists of 13 members under the Chairmanship of the Vice Chancellor.

The functions of this board are:

1. To advise authorities on all matters connected with the promotion of Advanced Studies and Research in university.
2. To propose regulations regarding the award of research degrees.
3. To appoint supervisors for research students to determine the subject of their thesis.
4. To recommend panels of names of paper setters and examiners for research examination after considering the proposals of the Board of Studies on this behalf.
5. To perform such other functions as may be prescribed by the statutes.
6. Furthermore, the Board also gives final approval for the synopsis.

D. Institutional Review Board (IRB)

All research conducted in the University must have a prior approval of the Institutional Review Board. It consists of 14 members (Specialists in different fields of medicine, religious scholar, lawyer, social worker, ethicist, specialists from other institutions). BASR reviews and approves only those research proposals which have a prior approval of the IRB. Besides, DUHS offers this service to those institutes who do not have their own IRB/ERB.

II. CAPACITY BUILDING IN RESEARCH

A. Workshops Conducted by ORIC:

The DUHS conducts various research-based workshops such as Hands-on workshops on SPSS, SAS, Excel, EndNote, Research Article writing, Study design etc., Faculty members and students are allowed to attend these workshops.

B. Training Sessions

The DUHS conducts training sessions related to IT & Vocational skills, development of research abilities and Data analysis.

C. Research Publication Management

ORIC manages a database containing all the records of research publications completed by the faculty members and students of DUHS.

D. Research Project Management

ORIC manages all the records of funded research projects newly completed by the faculty members and students of DUHS.

E. Research Funding Administration

All external funded research projects are reviewed and approved prior to submission to funding bodies and the progress of the same are monitored thereafter.

F. Collaborations

ORIC also provides a platform for the researcher to work with collaboration of other institutes at the national & international levels, and for grant writing.

III. THE JOURNAL OF DOW UNIVERSITY OF HEALTH SCIENCES (JDUHS)

Dow University of Health Sciences publishes Journal named The Journal of Dow University of Health Sciences (JDUHS) is a double-blind peer reviewed open access biomedical journal, science2007 with the aim to disseminate high-quality scientific research papers among the healthcare research community. The journal is published three times a year, in April, August, and December. The abbreviated name is "J Dow Univ Health Sci".

IV. DUHS - DICE HEALTH INNOVATION EXHIBITION

The Dow University of Health Sciences (DUHS) in collaboration with Distinguish Innovation Collaboration & Entrepreneurship (DICE) foundation (a USA based non-profit organization) organizes DUHS-DICE Health innovation Exhibition every year to promote health innovation culture in Pakistan. The idea behind the event is to motivate academia, industry, government, entrepreneurs, and expatriates to come to a common platform to showcase health innovations and technologies, share knowledge and further collaborate with each other for the rapid development of health innovative products, necessary for the economic development of the country.

V. Academic Research Activities at the University:

- A. Undergraduate Students Research Activities:** *A research component is also incorporated in the MBBS curriculum of DUHS along with other curricula of most of the academic programs offered at the Bachelor's level, including BBA. Each workgroup works with a faculty member of DUHS to accomplish their research objectives, as per their curriculum design.*
- B. Postgraduate Programs:** The Research Department facilitates most of the research at the postgraduate program level, including Masters', MPhil and PhD.
- C. Summer Short Courses:** The Department has initiated three months summer short courses last year. The courses on Applied Biostatistics, Fundamental Epidemiology, Statistical software, EndNote, helpful in health sciences research are taught from June to August.
- D. Training on Biostatistics and Research Methodology:** The department also facilitates training on specific topics of biostatistics and research methodology. Several workshops have been conducted by the faculty of the Research Department on the same.
- E. Foreign Scholarship Program:** Foreign Scholarship program is funded by the Higher Education Commission (HEC) of Pakistan, as and when announced under the 'Overseas Scholarship Schemes'. In recent years, 18 scholars have successfully completed their PhD program and joined the DUHS back.
- F. Statistical Consultation:** Department consults with faculty and students to conduct and coordinate all statistical works to different academic and research-based organizations

around Pakistan, including those from the pharmaceutical industry. These services include, but are not limited to, sample size calculation, data entry, data analysis and formatted table & graph of the output of the analyses.

G. Research Writing Consultation: Department also provides consultation in writing analysis and result sections of the research project/report. Besides investigators who want to write by themselves, the department guides them on how to interpret the statistical results.

H. Research Protocol Review Guidelines: The faculty also assists research students and faculty about the processes of research work and writing including questionnaire formatting, structure of protocol, literature review and consent form.

2.2. RESEARCH PROJECTS

1.2.1. COMPLETED

Total number Completed in 2021-2022	06
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1.2.2. NEWLY LAUNCHED PROJECTS (RESEARCH)

Total number of Newly Launched in 2021-2022	12
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2.3. PUBLICATIONS & AUTHORS CREDITED TO DUHS

Category	2021	2022
W	63	25
X	38	19
Y	172	121
Z	0	0
TOTAL	273	165

2.4. CONFERENCES, SEMINARS AND WORKSHOPS

The University's ORIC has conducted the following workshops/trainings in 2021-2022:

Workshops/Training	Date	Focus Area	Audience Type
Workshop - Systematic Review and Meta-Analysis	12 th Feb to 5 th Mar, 2022	Research & Development	Faculty / Researcher
International Conference on SDGs	21 st Dec to 23 rd Dec, 2021	Research & Development	Faculty / Researcher

Virtual Incubation Program for Women Entrepreneurs	Nov, 2021	Entrepreneurship/ Growth	Students
Workshop - Patent Filing and Patent Rights	23 rd Nov, 2021	IP rights and awareness, increased filings	Faculty / Researcher
Workshop - Qualitative Research Method	14 th Nov, 2021	Research & Development	Health Professional and Postgraduate Trainees
Workshop - Scientific Manuscript Writing	6 th Nov to 27 th Nov, 2021	Research & Development	Health Professional and Postgraduate Trainees
Workshop - SPSS	6 th Nov to 20 th Nov, 2021	Research & Development	Health Professional and Postgraduate Trainees
Workshop - Study Design	6 th Nov, 2021	Research & Development	Faculty / Researcher
Workshop - Creating an effective Pitch Desk	14 th Oct to 16 th Oct, 2021	Research & Development	Faculty / Researcher

2.5. RESEARCH JOURNAL

Journal of Dow University of Health Sciences (JDUHS):

About the Journal

The journal of the Dow University of Health Sciences (JDUHS) (Print ISSN: 1995-2198 and Online ISSN: 2410-2180) was established in 2007, with the aim to disseminate the high-quality scientific research papers among the healthcare research community. The journal is published three times a year, in April, August, and December. It is now in the Y category and Scopus indexed as of 2022.

Aims and Scope

The Journal of the Dow University of Health Sciences (JDUHS) is a double-blind peer-reviewed open access health sciences journal, aims to provide valuable knowledge and understanding of health problems and their solutions to basic and clinical scientists, and allied health sciences researchers. The journal has a special emphasis on primary research conducted in the field of health sciences in low and middle-income countries and considers original articles, review articles, short communications, case reports, commentary, and student articles on all aspects of health sciences.

Open Access Statement

This is an open access journal which means that all content is freely available without charge to the user or his/her institution. Users are allowed to read, download, copy, distribute, print, search, or link to the full texts of the articles, or use them for any other lawful purpose,

without asking prior permission from the publisher or the author. This is in accordance with Budapest Open Access Initiative (BOAI) definition of open access.

Indexing Information

The JDUHS is approved by Pakistan Medical and Dental Council (formerly PM&DC) & Higher Education Commission, Pakistan (HEC) and is abstracted/indexed by Index Medicus for the Eastern Mediterranean Region (IMEMR), PakMediNet, Google Scholar, EBSCO, International Committee of Medical Journal Editors (ICMJE), Crossref and Centre for Agriculture and Bioscience International (CABI). The abbreviated name is “J Dow Univ Health Sci”. The journal is available online and submission and processes of manuscript can be made while emailing to judhs@duhs.edu.pk.

Publisher

The Journal of the Dow University of Health Sciences is managed and published by Dow University of Health Sciences.

Volume - 16	Issue - 1	January - April - 2022
Volume - 15	Issue - 3	September - December - 2021
Volume - 15	Issue - 2	May-August - 2021
Total 03 Issues of Journals published in the month of July 2021 to June 2022		

2.6. RESEARCH COLLABORATIONS

2.6.1. Indigenous Research Collaborations:

S #	Name of Joint Research Grant and Funding Agency	National or International	Name of PI with Designation and Department	Thematic Area
1.	Loyola University Health System, Loyola University Chicago	International	Dr. Mushtaq Hussain	Vaccine
2.	Chapman University, California	International	Dr. Mushtaq Hussain	Proteins
3.	Universiti Malaysia Pahang	International	Dr. Mushtaq Hussain	Variant Proteins
4.	GETZ Pharma	National	Dr. Meraj Fatima	Neurology
5.	Local Challenge Fund-Higher Education Development in Pakistan	National	Dr. Shah Jahan	Public Health
6.	National Institute of Health	National	Dr. Muhammad Sohail	Vaccine
7.	Pharmevo Research Forum	National	Prof. Dr. Kashif Shafique	Public Health
8.	Defense Science & Technology Organization	National	Dr. Talat Roome	Vaccine

9.	Conservation Food & Health Foundation, Inc.	International	Prof. Dr. Kashif Shafique	Public Health
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2.6.2. Foreign Research Partners

S #	Collaborating Agency/Institution	Field of Study / Research	Scope of Collaboration
1.	Loyola University Health System, Loyola University Chicago	Vaccines	COVID-19 Vaccination association modulation of biomarkers, biomarkers of thrombo-inflammation, anti-heparin platelet factor 4 antibodies and release of endothelial glycosaminoglycans.
2.	Chapman University	Proteins	Modeling Human Disease in <i>Drosophila melanogaster</i>
3.	Universiti Malaysia Pahang	Variant Proteins	SARS-Cov-2 Delta Variant
4.	Queen Mary University of London	Biological Materials	Research Purpose and Material Transfer
5.	Conservation Food & Health Foundation, Inc	Public Health	Mental health capacity-building for primary healthcare providers to promote good health & well-being
6.	Imperial College of London, UK	Health Management	Dr. Raheelah Ahmad is an Adjunct Professor of IBHM. She is a member of IBHM's Board of Faculty. IBHM arranged two webinars and submitted a project for funding last year with her as a collaborator; at present, the DUHS is a shadow site with Imperial College for a research fund of the Wellcome Foundation, UK.
7.	University of Huddersfield, UK	Pharmaceutical Management	Dr. Hamid Ali Merchant is an Adjunct Professor. We worked on a half dozen articles and four of them were published in the local (general) press. He also conducted webinars (with DUHS & PPMA) on the current issues being faced by the pharmaceutical industry in Pakistan. During his visits, he gave valuable suggestions for improving operations of Dow Institute of Life Sciences. Moreover, he guides the scientists with his expert advice whenever a typical problem emerges (<i>pro bono basis</i>). He visited thrice during the last three years and will visit again in Dec. 2022.

8. Research collaboration between Dr. M. Ansar, **Université de Lausanne Hôpital Ophtalmique Jules-Gonin** Lausanne, Switzerland and Dr. Salman Ahmed, Dow College of Biotechnology was established to facilitate research work on Intellectual Disabilities
9. Research collaboration between Prof Karl-Heinz Department of Pathology and Immunology PATIM, **University of Geneva, Switzerland** and Dr. Salman Ahmed, Dow College of Biotechnology was established to facilitate research work on Tumor Microenvironment.

2.6.3. GRANT AWARDING BODIES FOR RESEARCH AND INNOVATION

1. DICE Foundation, USA
2. Sabin Vaccination
3. Islamic Bank Development Transform Fund
4. NIHR–Welcome Partnership for Global Health Research Collaborative Award
5. NRPU (HEC): National Research Program for Universities

2.6.4. National Linkages

S#	Collaborating Agency/Institution at the National Level	Field of Study / Research	Scope of Collaboration
1.	Neurology Research Grant, GETZ Pharma	Neurology	Impact of Ketogenic diet in children with Refractory Epilepsy, A randomized control trial in Pakistan
2.	Neurology Research Grant, GETZ Pharma	Neurology	Phosphorylation of TAU Protein and beta Amyloid-42 in differentiating Parkinsonism and its impact on disease severity
3.	Neurology Research Grant, GETZ Pharma	Neurology	Screening of anti-parkinson's compounds by rotenone induces BV2 Cell Activation
4.	Pharmevo Research Forum	Public Health	Metabolic Syndrome and Risk for Cardiovascular Disease in Apparently Healthy Subsets of Pakistani Adult Population.
5.	Defense Science and Technology Organization (DESTO)	Vaccine	Rabies Vaccine Development Project
6.	Salim Habib University	Biomedical Engineering	Research Partnership between DUHS AND SHU
7.	Center for executive education, Institute of Business Administration (CEE, IBA Karachi)	Healthcare Management	Research Collaboration
8.	Karachi Institute of Radiotherapy and Nuclear Medicine (Kiran Hospital)	Biomedical Sciences	Collaboration in Research of Biomedical Sciences
9.	Aga Khan university Hospital		Early Detection of oral precancerous lesions among smokeless tobacco users adolescents by analyzing salivary metabolites and cytokines

10. Research collaboration between Dr. Sidra Pervez, Shaheed Benazir Bhutto Women University (SBBWU), Peshawar and Dr. Faiza Nadeem, Dow College of Biotechnology has been established to facilitate research work on HEC-NRPU project entitled: "Single Batch Desizing, Bleaching and Bioscouring of Cotton Fabric: Eco-friendly and Green Solution for Textile Processing" (Grant No: 20-14910/NRPU/R&D/HEC/2021 2021).
11. Research collaboration between Dr. Faraz Moin, Z.H.Z Center of Proteomics, University of Karachi, Dr. Humera Waheed and Prof. Mushtaq Hussain, Dow College of Biotechnology on "Drosophila melanogaster as a Model for Toxicological Profiling of Big Four Venomous Snakes of Pakistan" has been established.
12. Research collaboration between Dr. Tabassum Hussain, Institute of Sustainable Halophyte Utilization, University of Karachi, Dr. Mahera Moin and Prof. Mushtaq Hussain, Dow College of Biotechnology on studying anticancer and antiviral potential of various plant species of Pakistan.

13.	Research collaboration between Prof. Raza Shah, Prof. Shabana Simjee, ICCBS, University of Karachi and Dr. Anum Gul, Dow College of Biotechnology has been established to facilitate research work on HEC-NRPU project entitled: “Development of Raloxifene-Loaded Self-Nanoemulsifying Drug Delivery System (SNEDDS)” (Grant No: 20-15102/NRPU/R&D/HEC/2021 2021).
14.	Research collaboration between Dr. Afsheen Amanat, KIBGE, University of Karachi, Karachi and Dr. Faiza Nadeem, Dow College of Biotechnology has been established to facilitate research work on HEC-NRPU project entitled: “Development of Pilot Scale System for Phycoremediation of Textile Effluent with Concomitant Production of Algal Biomass” (Grant No: 20-16273/NRPU/R&D/HEC/2021 2021)
15.	Research collaboration between Dr. Hammad Afzal, SZABIST, Dr Naheed Kausar, Jinnah University for Women and Dr. Sheeba Naz, Dow College of Biotechnology has been established to facilitate research work on VCSFI-2021 project entitled: “In-vitro Propagation and Enhanced Cannabinoids Production of Cannabis Sativa L. (Industrial Hemp)” (Grant No: DUHS/VC/2021 /11-61).

2.6.5. Funding Grants for Research & Development

i. FUNDING GRANTS FOR R&D FROM HEC, 2021-2022

S #	Name of Research Grant	Title of Research Proposal	Amount Approved (Rs.)	Date of Approval
1.	LCF-HEDP	The microbiological Characteristics and Molecular Epidemiology of Carbapenemase-Producing carbapenem-Resistant Enterobacteriaceae (CP-CRE) among hospitalized patients in Karachi, Pakistan	16,608,828.00	19 th May 2022
2.	SHEC	Metabolic Syndrome and risk for cardiovascular disease in apparently healthy subset of Pakistani adult Population	1,925,000.00	28 th Apr 2022
3.	NRPU	Development of Novel Silk Based Glass Ionomer Restoratives for the Stress Bearing Posterior Teeth	6,132,000.00	28 th Apr 2022
4.	NRPU	Modulation and Transplantation of Umbilical Cord Derived Mesenchymal Stem Cells using different protocol to target Alzheimer Disease: A Comparative and Therapeutic study	2,695,000.00	25 th Apr 2022
5.	GCF	Rabies Vaccine: Development of inactivated human rabies vaccine against wild-type strain in Pakistan.	53,472,500.00	23 rd Mar 2022
6.	NRPU	A search for early metabolomic signatures (candidate biomarkers) for diabetic foot ulcers in patients of diabetes by non-targeted metabolomic analysis.	1,450,900.00	1 st Mar 2022
7.	NRPU	Use of Digital Technology for improving Emergency Medical Services to develop mobile apps for Road Awareness and early response to Road Traffic Accidents	4,911,500.00	1 st Mar 2022
8.	NRPU	Molecular mechanism of neuronal protection and differentiation by natural compounds in human neural organoid cultures	2,750,000.00	5 th Jan 2022
9.	NRPU	Correlation Between Salivary Statherin And Calcium Levels And Its Interrelationship With Calcium Homeostasis And Bcl-2 In Oral Precancer And Oral Cancer Patients	4,922,500.00	22 nd Dec 2021
10.	NRPU	Whole exome sequencing for identification of small mutations and derivation of mutation specific induced pluripotent stem cells from Duchenne Muscular dystrophy Patients	5,711,200.00	15 th Dec 2021

11.	NRPU	Development of biological control approaches using epiphytic yeast to maintain postharvest quality and control fruit rot of mango, citrus & tomato.	9,520,500.00	22 nd Nov 2021
12.	NRPU	Development of Raloxifene-loaded self-nanoemulsifying drug delivery system (SNEDDS) with enhanced bioavailability Potential: A therapeutic implication in osteoporosis	6,129,200.00	17 th Nov 2021
13.	SRSP	Evaluation of Anti-Rheumatic Potential of ticagrelor in rheumatoid arthritis fibroblast like synoviocytes via modulation of NLRP-3 Inflammasome	2,600,000	9 th Sep, 2021
14.	SRGP	Metabolics & Urine-Cells MicroRNA profiling for Prognostication of acute kidney allograft Rejection and Post-Transplantation Infection Management	1,000,000	23 rd Sep, 2021
15.	SRGP	Aligning Comparative Proteomic and Genomic Profile of Indigenous Halophytes	1,000,000	15 th Jan, 2021
16.	SRGP	Microalgae mediated Synthesis of Silver and Chromium nanoparticles, a new biotechnological approach for industrial effluent treatment	1,000,000	15 th Jan, 2021
17.	RRG	IVIG production from convalescent plasma of COVID-19 survivors: a low risk, high efficiency passive immunization strategy against SARS-CoV-2	9,847,220	19 th Aug, 2020
18.	NRPU	Heterologous expression of streptokinase from beta hemolytic Streptococcal strain for pilot scale production of recombinant streptokinase	1,492,274	4 th Mar, 2019

ii. FUNDING GRANTS FOR R&D FROM NON-HEC, 2021-2022

S #		Name of Research Grant	Title of Research Proposal	Amount Approved (Rs.)	D
1.		Medisure Laboratories (Pvt.) Ltd.	Bioequivalence Study of Rahmacin (Clarithromycin) 250mg/5mlsuspension in Healthy Human Subjects.	2,049,731.00	30 th
2.		Platinum Pharmaceutical's (Pvt) Ltd	Bioequivalence Study of Perispa (Eperisone) Tablets 50mg in Healthy Human Subjects.	2,459,677.00	30 th
3.		Dynatis Pakistan (Pvt) Ltd.	Impact of Glite on Glycemic Control as an Add-On Therapy Among Type 2 Diabetic Patients	2,049,731.00	30 th
4.		Metrics Research Private Limited	A Multicenter, Randomized, Double-Blinded, Placebo-Controlled Study to Assess Safety and Efficacy of SIR1-365 in Patients with Severe COVID-19	2,664,650.00	30 th
5.		Hongkong Tigermed Co., Limited	A Global, Multi-Center, Randomized, Double-Blind, Placebo-Controlled, Phase III Clinical Study to Evaluate the Efficacy, Safety, and Immunogenicity of Sequential Immunization of Recombinant SARS-CoV-2 Fusion Protein Vaccine (V-01) Against COVID-19 in Healthy Adults Aged 18 Years and Older after the Vaccination of 2 Doses of Inactivated Vaccines	2,664,650.00	30 th
6.		Martin Dow	Awareness Regarding Pre-Diabetes-Collaborative Research Project	1,500,000.00	13 th

7.		Conservation Food & Health Foundation, Inc	Mental health capacity-building for primary healthcare providers to promote good health & well-being	4,099,462.00	20 th
8.		National Institute of Health	COVID-19 Vaccination during pregnancy: Perinatal outcome, safety and acceptance of vaccine.	449,800.00	16 th
9.		National Institute of Health	Metabolic Syndrome and Risk for Cardiovascular Disease in Apparently Healthy Subsets of Pakistani Adult Population.	1,780,348.00	16 th
10.		National Institute of Health	Genomic predictor of oral squamous cell carcinoma OSCC metastasis and malignant transformation in oral submucous fibrosis OSF: Expression of PLOD2 gene and miRNA 26a and 26b.	2,325,160.00	16 th
11.		Pharmevo Research Forum	Metabolic Syndrome and Risk for Cardiovascular Disease in Apparently Healthy Subsets of Pakistani Adult Population.	300,000.00	7 th
12.		Neurology Research Grant	Screening of anti-parkinson's compounds by rotenone induces BV2 Cell Activation	500,000.00	24 th
13.		Neurology Research Grant	Impact of Ketogenic diet in children with Refractory Epilepsy, A randomized control trial in Pakistan.	500,000.00	15 th
14.		Neurology Research Grant	Phosphorylation of TAU Protein and beta Amyloid-42 in differentiating Parkinsonism and its impact on disease severity.	500,000.00	15 th
15.		SAMI Pharmaceuticals Pvt Ltd.	The Hybridoma Technology: A preferred Method for Monoclonal Antibody Production	15 Million	21 st
16.		Grand Challenge Fund (Medisure Laboratories Pakistan (PVT) Limited	Development and assessment of multivariate SARS-COV-2 Mrna Vaccine	10 Millions	7 th
17.		Martin Dow	Collaborative Research Project-Pilot Project	1,500,000	13 th
18.		NIHR-Wellcome Partnership for Global Health Research Collaborative Award	Treating hepatitis C in Pakistan. Strategies to avoid resistance to antiviral drugs'	£2,791,488	9 th
19.		DICE Foundation	Shirtless organic bath and body product line	200,000	No
20.		SAMI Pharmaceuticals Pvt. (Ltd.)	Development and small-scale Manufacturing of Human Rabies Vaccine in a Serum-Free Medium Using Fixed Strain Cultivated in Vero Cells	7.5 Million	16 th

2.6.6. Vice Chancellor's Seed Funding Initiative (VCSFI)

Established Annual Vice Chancellor's Seed Funding Initiative (VCSFI) for Intramural Funding of Competitive Grant Applications.

DUHS Vice Chancellor Seed Fund Initiative (VCSFI): Start Date 23-May-2019							
S #	Grant No	Level of Faculty Appointment	Title of Research Proposal	Amount Approved (Rs.)	Amount Received (Rs.)	Completion/ Pmt. Fulfilled Dates	Project Status
1	2019B-0043	Assistant Professor	Role of 7-ketocholesterol (7-kcho) in pathophysiology of diabetic nephropathy (DN):STREPTOZOTOCIN(STZ)induced disease model	500,000	499284	10/16/2020	Completed
2	2019B-0074	Associate Professor	Preclinical studies of a novel simvastatin -lecithin stabilized Nano formulation against atherosclerosis in Apo-E knockout mice	500,000	500000	9/10/2020	Completed
3	2019B-0072	Assistant Professor	Gene correction of specific 619 BP deletion using CRIS-PR-Cas9 in Induced Pluripotent stem cell derived from beta Thalassemia patients	500,000	500,000	6/23/2022	Completed
4	2019B-0078	Assistant Professor	Role of Autophagy in Different Histological subtypes of Adult diffuse gliomas	350,000	350000	2/8/2021	Completed
5	2019B-0015	Senior lecturer	Participation in DUHS in normative Pakistan data collection for the evaluation Ayres sensory integration (EASI) an international project in collaboration with Thomas Jefferson University Philadelphia USA	700,000	699994	10/4/2021	Completed
6	2019B-0016	Assistant Professor	Osteogenic differentiation of Wnt Activated human periodontal ligament stem cell (hPDLSCs) in Three dimensional (3D) hydrogels	500,000	500000	12/28/2020	Completed
7	2019P G-0065	Post Graduate	In vitro and in vivo anticancer studies of targets flower extract and pure compound against hepatocellular carcinoma	250,000	250000	12/28/2020	Completed
8	2019P G-0075	Post Graduate	Investigation c-MYC sequential and expressional polymorphism in oral squamous cell carcinoma	250,000	250000	8/2/2022	Completed
9	2019P G-0036	Post Graduate	Investigation role of kaiso target proteins expression in field cancerization and tumor progression of oral squamous cell carcinoma (OSCC)	250,000	250000	2/8/2021	Completed
10	2019P G-0011	Post Graduate	Investigation the synergistic effects of bevacizumab and celecoxib on angiogenesis using in vitro derived human umbilical vein endothelial cells	250,000	249300	10/7/2020	Completed
11	2019P G-0040	Post Graduate	Association of polymorphisms in cytochrome P450 3A4 and deoxycytidine kinase genes on the adverse effects by cytarabine in treatment of acute lymphoblastic/ myeloid leukemia	250,000	250000	5/27/2021	Completed
12	2019B-0053	Assistant Professor	Microbial De Phosphorylation of phytic acid - An alternative approach to increase the bioavailability and bio access	500,000	475375	3/5/2020	In Process
13	2019B-0004	Dean and Principal	Pharmacodynamics and pharmacokinetic studies on	900,000	195000	11/11/2021	In Process

			analogues of fluoroquinones against MDR-TV				
14	2019B-0005	Assistant Professor	Experimental validation of computationally designed anti-cancerous peptide, dip-36, against c-myc-usp 36 complex in diffused last beta-cell	725,000	400000	8/28/2020	In Process
15	2019P G-0004	Post Graduate	Impact of brain derived neurotrophic factor gene polymorphism on its peripheral levels in schizophrenic patients	250,000	225000	7/10/2021	In Process
16	2019P G-0077	Post Graduate	Comparative analyses of physical and elemental characteristics of dental material of vertebrates	165,500	144949	7/28/2021	In Process

DUHS Vice Chancellor Seed Fund Initiative (VCSFI): Start Date 19th Nov 2021

S #	Grant No	Level of Faculty Appointment	Title of Research Proposal	Amount Approved (Rs.)	DATE	Status
1	2021C-0002	Professor	Investigating Genetic Variants In Esophageal Carcinoma Using Massively Parallel (Next-Generation) Sequencing Methods	1,500,000	20.8.2022	Completed
2	2021B-0020	Assistant Professor	Neural Regeneration: Transplantation Of Wnt, Notch And FGF-9 Activated Human Neural Progenitor Cells In Animal Model Of Neurodegenerative Disorder	500,000	25.6.2022	Completed
3	2021P G-0002	Phd	Association Of SARS Cov-2 And Its Variants With The Disease Outcome And Laboratory Parameters Among Hospitalized Patients	250,000	21.6.2022	Completed
4	2021P G-0009	M.Phil.	Subgenomic Mutation Analysis Of Receptor Binding Domain Of SARS-Cov-2 Spike Protein	250,000	29.6.2022	Completed
5	2021P G-0020	M.Phil.	Investigation Of Anti-Inflammatory Potential Of Isolated Phenolic Compound(S) From Melia Azedarach (L). Flower Via NF-Kb And MAPK/P38 Signaling Pathway	250,000	21.7.2022	Completed
6	2021P G-0021	M.Phil.	Design, Synthesis, And Characterization Of Novel Celecoxib Derivatives And Their Anticancer And Anti-Inflammatory Potential, And Molecular Docking	250,000	16.9.2022	Completed
7	2021P G-0022	M.Phil	Error Rate And Coefficients Quantification Of Neurological Defects Due To Consanguineous Mating Using Drosophila Melanogaster Model	250,000	13.7.2022	Completed
8	2021P G-0023	M.Phil	Investigating Gene Expression Based Drug Screening On Alzheimer's Disease Patients-Specific Neuronal Cells Derived From Ipscs	250,000	4.8.2022	Completed
9	2021P G-0016	Mds	Association Of ABCB5 (Chemo Resistance Marker) And Cancer Stem Cells Markers (OCT4, SOX2) In The Of Oral Squamous Cell Carcinoma Using Immunohistochemistry (IHC)	250,000	18.6.2022	Completed

10	2021P G-0025	Mph	Effect Of Oral Hygiene And Nutrition Education (Using Telehealth) On Nutrition And Oral Health Literacy Of The Caregivers Of The Children With Autism In Karachi, Pakistan.	250,000	22.8.2022	Completed
11	2021B- 0023	Assistant Professor	IN-VITRO Propagation And Enhanced Cannabinoids Production Of Cannabis Sativa L. (Industrial Hemp)	1,000,000	18.6.2022	In Process
12	2021B- 0027	Assistant Professor	Development And Characterization Of A Transdermal Patch Containing FDA Approved NSAID For The Treatment Of Arthritis	421,000	26.8.2022	In Process
13	2021B- 0004	Assistant Professor	Formulation Development Of Iontophoresis Based Transdermal Delivery System Of Anti Migraine Drug	707,000	29.8.2022	In Process
14	2021B- 0008	Assistant Professor	Identification Of Histopathological And Molecular Subtypes Of Preeclampsia	1,500,000	21.6.2022	In Process
15	2021B- 0013	Assistant Professor	Modulation And Transplantation Of Umbilical Cord Derived Mesenchymal Stem Cells In Animal Model Of Alzheimer's Disease: A Preclinical Study	1,000,000	21.7.2022	In Process
16	2021B- 0014	Assistant Professor	Isolation, Purification And Characterization Of Bioactive And Anti-Cancerous Small Molecules From Oxalis Corniculata	980,000	21.6.2022	In Process
17	2021B- 0018	Assistant Professor	Osteoinductive Potential Of Selenium Nanoparticles Via Regulation Of Oxidative Stress In Human Umbilical Cord Derived-Mesenchymal Stem Cells: A Promising Therapeutic Approach In Bone Disorders	1,000,000	18.6.2022	In Process
18	2021C- 0006	Assistant Professor	Expression Of PD-1 And PDL-1, The Immune CheckPoint In Triple Negative Breast Cancer – Exploring New Avenues To Treat The Untreatable.	660,000	21.6.2022	In Process
19	2021P G-0012	M.Phil.	Modulation Of Apoptotic And AKT/PI3K/Mtor Signaling Pathways In Glioblastoma Cells Using Small Molecules	250,000	*****	In Process

2.6.7. Operations of the Office of Research, Innovation and Commercialization (ORIC)

Introduction

In 2011, under the directives of Higher Education Commission (HEC) of Pakistan, DUHS developed the Office of Research, Innovation and Commercialization (ORIC) to promote innovation and commercialization at the university.

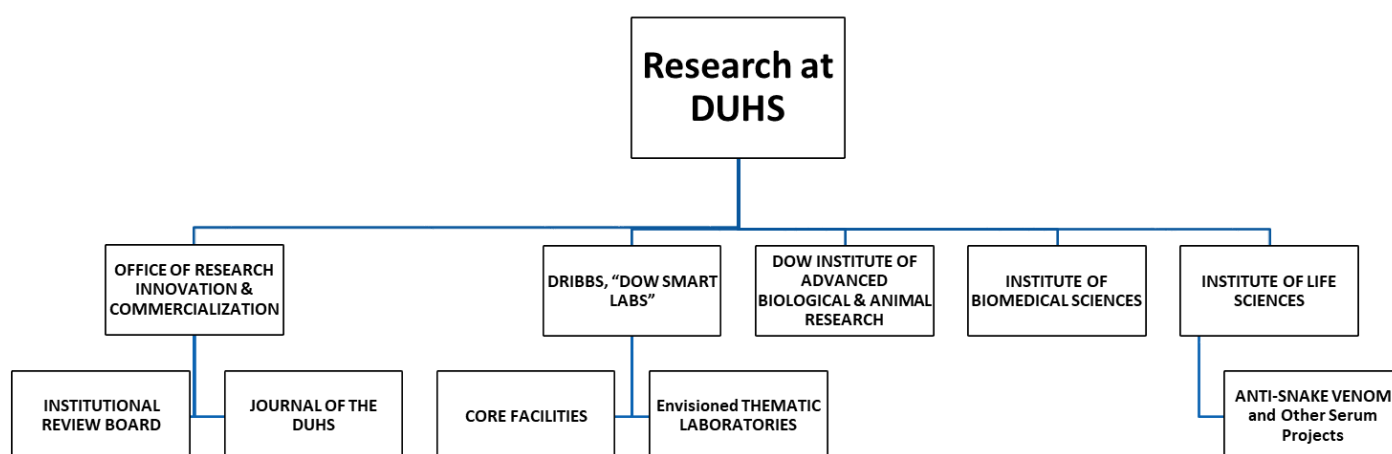
The ORIC, DUHS since then, adapted policies for augmenting activities related to innovation and commercialization at DUHS. The ORIC office at DUHS has divided its activities into four

diverse segments including research projects, linkage establishment, innovation support and commercialization.

ORIC provides end to end services for all matters pertaining to research & development, Innovations, commercialization, patents, collaborations, arranging seminars / symposiums, conferences, workshops, and research publication honorarium. By large, ORIC is the focal point for all research related activities of the university. ORIC facilitates the University researchers (faculty members and scholars) to promote their research work both nationally and internationally.

Moreover, ORIC functions as a bridge between the Industry and the academia, hence providing a platform for the universities where they can be facilitated both financially and strategically, also, contributing to the R&D support of the industry.

Re-organization of Research at DUHS as per Strategic Vision 2030



Vision of ORIC

It is the Vision of ORIC, DUHS to promote and align various research projects at the University, which have a direct impact on society today.

Programs and Services

Organized & Hosted Health Innovation Exhibition

ORIC-DUHS has successfully organized 5 annual health innovation exhibitions from 2015-19 respectively. In the last exhibition which was held in 2019, over 40 universities took part from

all across Pakistan as well as one of the prominent universities of Malaysia was also a part of the exhibition.

The exhibition received an overwhelming response as over 300 innovative projects were displayed of diversified modalities. It was a defining platform of the academia and industry linkage as numerous pharmaceuticals and medical devices organizations contributed to the exhibition hence providing financial and technical support. Moreover, around 20 projects were funded by the industry in various capacities.

Workshops, Seminars and Training Programs

ORIC has been organizing and supporting capacity building activities in the fields of research, entrepreneurship and technology and in pursuance of this approach a considerable number of activities are being organized annually as listed below:

1. Workshop on “Novel Coronavirus (nCoV): Fear VS Negligence & Emergency Response”
2. Session on Endnote for Referencing
3. Scientific Manuscript Writing
4. BCQ Writing Skills
5. Seminar on Medicinal & Nutritional Benefit Moringa Oleifera
6. Seminar on Patent Database Search
7. Workshop on “Biosafety and Security in Health Care Institutions
8. Seminar on Marketing University technologies
9. Workshop on Writing a Business Plan
10. Session for Aspiring entrepreneurs
11. Workshop on Digital Marketing

NRPU, SRGP & Other Research Grant Programs Of the Higher Education Commission

ORIC-DUHS has been facilitating faculty and students with the National Research Program for Universities-NRPU grants; the ORIC staff has been keen on managing the timeline of the proposals and encouraging the quality proposals to be funded in the program.

There have been over 50 grants awarded to Dow University since the inception of ORIC office and ORIC office ensures the timely disbursement of these grants and maintains systematic records.

Vice Chancellor’s Seed Funding Initiative (VCSFI)

Besides the HEC grant funds, ORIC-DUHS is also managing the disbursement of the VCSFI program which is an initiative of Dow University to support the quality research and ORIC office has been on the up with the provision of services and supporting such initiatives, as a result over 20 projects from students and faculty have been funded and the funds have been disbursed accordingly.

Innovation

ORIC, DUHS promotes innovative research ideas at the University through workshops, brainstorming sessions and intellectual property discussions with all major stakeholders of the University.

The establishment of the Department of Research took place with the inception of Dow University of Health Sciences, with the aim of growing a quality research culture in the institute. The DUHS has research facilities and resources of international standards for students and faculty across all disciplines.

2.7. THE 6TH ALL PAKISTAN DUHS-DICE HEALTH INNOVATION EXHIBITION

Dow University of Health Sciences is on a mission to revolutionize academia with entrepreneurial activities. The 6th All Pakistan DUHS – DICE Health Innovation Exhibition was held on December 30, 2021. This distinguished and unique event provides a platform for the entrepreneurs and young generation to share their innovative ideas and work for Academic Industry, Capitalists from Government and Private sectors and the expatriates to interact jointly and share knowledge at par with the developed countries.

The main objectives of this exhibition are:

1. To establish a strong linkage between Academia and Health providing institutions.
2. Motivate professionally educated youth to generate innovative ideas and utilize currently available state of art technologies and software, for practically possible development of health related products and services.
3. To foster a culture of innovation and Entrepreneurship in the country and make it a part of Nation's DNA.
4. Creating a positive and favorable image of Pakistan's health sector.

Vision Statement of the Exhibition

"Produce Globally Innovative Ideas Related To The Health Industry To Improve The Quality Of Life Of Every Individual".

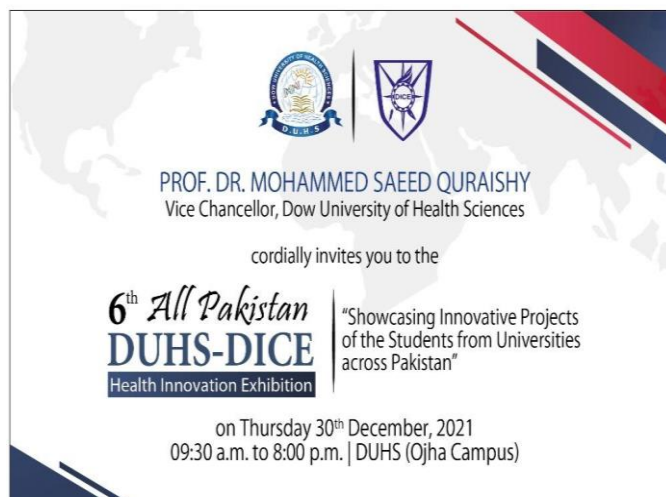
Mission Statement of the Exhibition

- Absorb core values
- Promote innovative observers at all levels
- Reform procedures, systems and processes at all levels
- Mature faculty and staff members to meet the trials

National Innovation Basket Session (NIB)

Activity followed by Panel discussion to list down short term, medium term and long term projects for the sustainable growth of textile exports of Pakistan.

5 sessions related to improving the quality of life of every individual were also the highlights of this auspicious event participated by well-known personalities related to medical devices, alternative medicine, health care, pharmacy & nutrition.



DUHS-DICE Shark Session An initiative to pitch Top 10 good student research projects to CEOs/Technical Directors for funding with the objective to encourage innovation by youth and to make it beneficial for industry.

2.7.2. COMMERCIALIZATION ACTIVITIES OF DUHS

ORIC, DUHS, envisions financial sustainability of the University; therefore, it promotes transformation of innovative discoveries into industrial ventures. The entrepreneurship spirit has been nurtured at the University, leading to commercial projects in the year 2021-22, including the following:

1. 'DIGIPILL PHARMACY': Doorstep Pharmacy & Community Services

Project leader: Amat UI Aziz Siddiqui; Status: Prototype in progress

Digipill is essentially an e-pharmacy, allowing its customers to order and receive medicines online. By using the best modern technology available to us DigiPill seeks to fulfill prescriptions with zero medication errors, through drug and disease information and e-record(s) of patient profiles; moreover data collection is done using online electronic questionnaires and their analysis for disease patterns. DigiPill aims to move from traditional method of orders and delivery to a more personalized and targeted e-service, where quality is based on the ability of our website to provide the ultimate experience of ordering & payment for genuine medication online, making sure correct medicine is delivered effectively and efficiently under the guidance of registered pharmacists. Furthermore, transparency is an issue, which has plagued pharmacies everywhere; we intend to overcome this by allowing the customers to use our interactive online platform where direct comparison can be made between sellers for products and services provided by them.

2. FEMWELL: SEED CYCLING GRANOLA BAR

Project leader: Leena Qazi; Status: Product Ready (Testing phase)

FEMWELL has introduced the concept of seed cycling into a granola bar to make it more palatable and hassle free. Our seed bars are divided into two parts which are to be consumed over the span of a month. The product aims to stabilize the reproductive hormonal system, regulate periods, reduce acne, alleviate the symptoms of polycystic ovarian syndrome (PCOS), PMS, and infertility, along with providing a healthy, hormone friendly and portable.

3. BIODEGRADABLE PLASTIC

Project Leader: Ahsan Khalid; Status: Prototype Ready

Since 1967, global plastic production has increased from two million tonnes to 380 million tonnes, almost three times faster than the world's GDP. Since 1950, the world has produced 9 billion tonnes of plastic waste. Of that only 9% has been recycled and another 12% incinerated. The rest of the waste was either dumped into landfills or oceans. This dumped plastic takes about 100 plus years to decompose, turning into a much harmful byproduct as Microplastics. These microplastics pollute marine life, endangering those under water whereas the same plastic in soil discourages the fertility of the land by making it toxic and harmful. Keeping in view the above situation and the fact that the world cannot simply decrease the use of plastic products, therefore to avoid the impending harm from excessive plastic usage, a viable alternative is through the use of Biodegradable Plastic. Made from organic and disintegrable ingredients, the idea of Biodegradable plastic proves to be safe and efficient in a number of ways. The observed degradation time of 8 days is significantly more efficient as compared to that of conventional plastic. Production of Biodegradable plastic does not require extensive use of non-renewable energy resources as compared to conventional ones. Due to its safe ingredients, it is non-toxic in nature also on the other hand after decomposition, soil fertility is increased. This idea of Biodegradable Plastic holds the potential to revolutionize the plastic industry. A much safer and efficient way to use plastics in our daily life, without contributing any harm to life on earth and the planet itself.

4. Nutribay Tea Bags

Project Leader: Hafsa Qazi; Status: Product Ready

Nutriza Organic's product "NUTRIBAY TEA BAGS " have been prepared by using bay leaves with other different ingredients. Our main purpose is to make a replacement against commonly used caffeinated Green tea which is made from camellia sinensis leaves. The product is caffeine free and a rich source of vitamin A, vitamin C, iron, potassium, calcium, and magnesium. Bay leaves have been proven to be useful in the treatment of diabetes, cancer and cardiovascular diseases.

5. GREEN EARTH- PLANT PROTECTION

Project Leader: Namira Irfan; Status: Product Sample Ready

The use of synthetic pesticides to control pests and increase crop yield is a common practice, but they cause several environmental and health problems. Therefore, there is a need to explore alternative approaches to reduce the sole dependence on synthetic pesticides. When

searching for a safe and effective product to control insects and disease in your lawn and garden, look no further than organic neem pesticide. Our product is organic neem pesticide made with neem leaf and turmeric powder. It's a powerful organic solution to your most difficult-to-manage infestations. Neem leaves have azadirachta compound so that it is used as a pesticide and insecticide. It also damages fungi. Organic neem pesticide damages the harmful pest and insect throughout from the garden like aphids, spider mites, white flies, and mealybugs. Spraying organic neem pesticide that is not harmful to the body and nature. 200 grams of Neem Leaves (with few of the branches) were taken and soaked in 1 liter of water for 10 minutes. Then they were boiled by adding 30 grams of Turmeric for 20-25 minutes. It was then left covered to cool and settled down for 24 hours. The change in color of the liquid was observed. After the resting period, all the solid particles were filtered twice or until the solid residues were completely removed. The liquid left behind was added with water (half an amount of the prepared liquid). The organic neem pesticide, a liquid that pests can't resist, is ready to use on plants.



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CHAPTER 3

Quality Assurance

3.1. IMPACT OF QUALITY ASSURANCE IN THE UNIVERSITY

Dow University of Health Sciences has a well-developed Quality Assurance mechanism that monitors the feedback of the academic programs, to ensure compliance with HEC criteria, standards of various Accreditation Councils and benchmarking with national and international institutions.

Worldwide, universities rely on quality assurance procedures to achieve excellence in their academic programs, as well as to sustain it in future. In 2006, as per the directives of Higher Education Commission (HEC) Pakistan, the Quality Enhancement Cell (QEC) at Dow University of Health Sciences was established.

In this regard, a number of measures for quality enhancement and assurance has introduced to have an effective quality assurance setup with standardized procedures and practices in health education, which includes:

- Faculty and course assessment through students' feedback.
- Preparation of Program Self-Assessment Reports for all degree awarding programs.
- Implementation of the Quality Management System at Dow University of Health Sciences, in accordance with minimum HEC criteria for graduate level and post-graduate programs.

Comparison of Rankings

Ranking Agencies	2020	2021	2022
QS ASIA University Rankings	451-500	401-45	351-400
QS World University Rankings by Subject: Medicine			551-600
THE SDG 3-Good Health and Well	401-600	201-300	101-200 /1101
THE SDG 4-Quality Education	401-600	601-800	601-+800 /1180
THE SDG 5-Gender Equality	201-300	201-300	401-600 /938
THE SDG 6-Clean Water and Sanitation	-	401+	401-600 /635
THE SDG 17-Partnership for the Goals	601+	1001+	1001+ /1441
THE Overall	601+	801-1000	801-100 /1410

3.2. QUALITY ENHANCEMENT CELL AT DUHS

The Quality Enhancement Cell at Dow University of Health Sciences was established in the 1st phase of HEC implementation in 2006, along with 29 other cells in various public sector universities throughout Pakistan. The prime objective of QEC is to practice evaluative measures in order to achieve excellence in program delivery. Since its establishment, QEC has been continuously involved in monitoring and measurement of Quality Management System (QMS) processes and the academic services throughout the DUHS.

Effectiveness of QEC-DUHS by HEC

- The Yearly Progress Report for 2021-22 is submitted to HEC for evaluation and has always been considered top tier.

Responsibilities of QEC-DUHS

The responsibilities of QEC include:

- Preparing and reviewing the program evaluation through Self- Assessment.
- Reviewing the Quality of teaching and learning in each subject area through HEC prescribed feedback forms as per the guidelines given for each form in coordination with QMS coordinators and SAR Program Teams.
- Ensuring that the University's Quality Management System is designed to fit with the requirements of HEC.
- Follow-up on the accreditation of all the degree awarding programs offered by the University.
- Submit validated data for Institutional national and international rankings.

3.3. KEY PERFORMANCE INDICATORS OF QEC-DUHS IN UNIVERSITY	Status as of 2021 - 2022
QEC Assessments	
No. of Academic Programs Assessed through Self-Assessment Reporting	All degree awarding programs
No. of Courses Assessed (Course-Wise Assessment Evaluations)	1924 Courses Assessed Online
No. of Faculty Assessed (Student-Teacher Evaluation as Prescribed by HEC)	1765
Number of Programs with National or International Accreditations	96 Programs are Accredited
Number of Faculty Trained through Professional Development Center	451 Faculty Trained

HEC prescribed Feedback Forms:

QEC-DUHS successfully conducted the following online Performa's for feedback evaluation in all the degree-awarding programs of DUHS:

Faculty Survey	Alumni Survey
Employer Survey	Faculty Resume
Faculty Course Review Report	Teacher Evaluation Form
Research Student Progress Review Form	Survey of Graduating Students
Survey of Department Offering Ph.D. Programs	Student Course Evaluation Questionnaire

3.4. QUALITY INITIATIVES FY 2021 – 2022

The quality initiatives for the Year 2021-2022, in compliance with the Higher Education Commission, Pakistan are the following:

1. Accreditation of All Programs, and application of NOC from HEC for necessary postgraduate programs.
2. Establishment of the QEC Setup within all the affiliated colleges of Dow University of Health Sciences, with dedicated staff to ensure the implementation of the internal quality assurance mechanism.

Establishment of the QEC Setup at all the affiliated colleges of Dow University of Health Sciences, as required by HEC, Pakistan in the FY 2021-2022

1. Sindh Institute of Medical & Allied Science
2. Abdali Institute of Nursing and Health Sciences
3. Khyber School of Nursing & Allied Health Sciences
4. Al-Nimrah College of Nursing & Health Sciences
5. Pakistan Rangers College of Nursing
6. City Institute of Health Sciences

3.5. MEMBERSHIP OF QUALITY ASSOCIATIONS/NETWORKS

QEC has valuable memberships of different associations/networks at International/National levels:

S. #	Memberships in Quality Associations/Networks
1.	Accreditation Agency Curacao – AAC
2.	Member of Talloires Network since 2009.

3.	Prospective member of Asia Pacific Quality Network (APQN).
4.	Member of the Learning Innovation Division, HEC Pakistan since 2005.
5.	International Network for Quality Assurance Agencies in Higher Education
6.	Pakistan Network of Quality Assurance in Higher Education-INQAAHE
7.	American Association of Medical Colleges, Visiting Students Learning Opportunities (VSLO)
8.	Corporate and Associate Member of Association of National and International Universities
9.	Research and Educational centers, such as PIQC, Institute of Quality, Pakistan

3.4. ACCREDITATIONS OF DEGREE AWARDING PROGRAMS FROM ACCREDITATION COUNCILS

1.	MBBS program at Dow Medical College (DMC) - Accredited by Pakistan Medical Commission (PMC)
2.	MBBS program at Dow International Medical College (DIMC) - Accredited by Pakistan Medical Commission (PMC)
3.	Bachelor of Dental Surgery (BDS) program at Dr. Ishrat ul Ebad Khan Institute of Oral Health Sciences (DIKIOHS) – Accredited by Pakistan Medical Commission (PMC)
4.	Bachelor of Dental Surgery (BDS) program at Dow International Dental College (DIDC) – Accredited by Pakistan Medical Commission (PMC)
5.	Bachelor of Dental Surgery (BDS) program at Dow Dental College (DDC) – Accredited by Pakistan Medical Commission (PMC)
6.	Pharm D program at Dow College of Pharmacy (DCOP) - Accredited by the Pakistan Pharmacy Council (PPC).
7.	Post RN Nursing program at Institute of Nursing (ION) - Accredited by Pakistan Nursing Council (PNC).
8.	BS Generic Nursing program - Accredited by Pakistan Nursing Council (PNC).
9.	Post RN BSM , Midwifery program at the Institute of Nursing and Midwifery- Accredited by Pakistan Nursing Council (PNC)
10.	Master of Nursing (MSN) program- Accredited by Pakistan Nursing Council (PNC).
11.	MPhil (Pharmaceutical Sciences) at Dow College of Pharmacy (DCOP) - Accredited by the Pakistan Pharmacy Council (PPC).

12. MPhil (Basic Medical Sciences) at Institute of Basic Medical Sciences- Accredited by Pakistan Medical Commission (PMC)
13. Master of Dental Surgery (MDS) program at Dr. Ishrat ul Ebad Khan Institute of Oral Health Sciences (DIKIOHS) - Accredited by Pakistan Medical Commission (PMC)
14. Master of Public Health (MPH) at School of Public Health- Accredited by Pakistan Medical Commission (PMC)
15. MS in Epidemiology and Biostatistics (MSBE) at School of Public Health- Accredited by Pakistan Medical Commission (PMC)
16. MS in Public Health (MSPH) at School of Public Health- Accredited by Pakistan Medical Commission (PMC)
17. Master in Health Professional Education (MHPE) at Dow Institute of Health Professionals Education- Accredited by Pakistan Medical Commission (PMC)
18. Master of Surgery (MS) at Department of Postgraduate Studies- Accredited by Pakistan Medical Commission (PMC)
19. Doctor of Medicine (MD) program at Department of Postgraduate Studies- Accredited by Pakistan Medical Commission (PMC)
20. BBA & MBA Programs are in the process of accreditation from the National Business Education Accreditation Council (NBEAC).

3.5. SEMINARS/WORKSHOPS & TRAINING EVENTS AT QEC

Following seminars/workshops and training QEC organized and contributed in the year 2021 - 2022.

S. #	Name of Event/Seminar/Workshop/ Training	Date	Purpose
1.	Contribution in "Self Postgraduate Program Review" at IBA city campus, Karachi	27 th June, 2022	To assess the adherence of postgraduate programs offered at the institute to minimum HEC criteria.
2.	Awareness session on the 'Preparation of Program Self-Assessment Report' conducted by QEC-DUHS	10 th May, 2022	To inform the participants about the importance and procedure of SAR with respect to quality assurance of academic programs.
3.	Guest Speaker Session on 'The Significance of Impact Rankings' organized by QEC-DUHS by Dr. Abdul Wahid Usmani	16 th April, 2022	To identify the role of faculty and administration in meeting the requirements of Impact Rankings.
4.	Contribution and Participation in International Conference on "Quality Assurance In Higher Education" organized by PNQAHE at Shah Abdul Latif University Khairpur, Sindh	8 th to 10 th March, 2022	To learn and share best practices, techniques and procedures applied for Quality Assurance and Enhancement in Higher Education Institutes.
5.	Contribution in Seminar on 'Implementation of Modern tools and Methodologies for Quality Assurance in Higher Education Institutions'	10 th February, 2022	To discuss the implementation of modern tools and methodologies for Quality Assurance in Higher Education Institutions

6.	Awareness session on the 'Functioning of Quality Enhancement Cell' organized by QEC-DUHS	31st Dec, 2021	To inform the participants about the importance and procedure of QEC with respect to the HEC quality assurance mechanism of academic programs.
7.	Contribution in International Conference on "Sustainable Development Goals" at DUHS	21 st December, 2022	To highlight the multi-dimensional context of gender inequalities prevailing in Pakistan and to explore inequality in social, cultural and legal implications to establish equality in the social system.
8.	Participation in Capacity Building workshop on "Conducting Effective Institutional Performance Evaluation" at Indus University	2 nd December, 2021	To learn the effective tools in order to conduct the Institutional Performance Evaluation as per the HEC guidelines.



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CHAPTER 4

Faculty Development

4.1. PROFESSIONAL DEVELOPMENT CENTER (PDC) DUHS

With the establishment of Dow University of Health Sciences (DUHS) in 2004, it was envisioned that Continuing Medical Education (CME) should be promoted within the faculty and students of Dow University. The Professional Development Center started working as the “Office of CME” as of January 2004. Under this office, CME lectures, seminars, symposia and conferences were conducted on a regular basis. Furthermore, International Health Days were celebrated regularly. Over a period of a year and a half, the faculty dedicated to PDC managed to organize more than 100 national and International events, with the dedication and efforts of the Faculty and Alumni abroad.

After the devastating earthquake of 2005, it was thought to add hands-on workshops in addition to the CME lectures, which were mostly theoretical. Thus the Office of CME was amalgamated into a more comprehensive Professional Development Center (PDC) of Dow University of Health Sciences. Also, a formal inauguration was performed by the Chancellor of the University, Governor of Sindh.

Subsequent to its formation, two divisions were formed within the PDC, namely Surgical and Allied and the Medical and Allied, where faculty members were designated as Directors of these two divisions. They were given the task to do a Training Needs Assessment and offer programs for different categories of health Professionals.

The Professional Development Center has a simulated ICU, simulated Operation Theater, Laparoscopic / Endoscopic Suites, three training halls and a Conference Room. Equipped with the latest audio-visual and multimedia systems, state of art equipment, electronic simulators and manikins, the PDC is a site for all those healthcare professionals looking to enhance their skills with hands-on training.

The Professional Development Center currently provides training facilities in the basic and advanced skills to undergraduates, postgraduates, residents, faculty members and other health professionals. PDC has its head office at DMC with its branch at Dow International Medical College (DIMC), Ojha with similar facilities, equipment and instructors. Each wing of PDC has a dedicated Undergraduate Skills Lab.

PDC consists of CME, CPD, and Skills & Misc. Programs

1. Continuing Medical Education (which deals with Seminars, lectures, symposia and conferences).
2. Continuing Professional Development (that deals with long duration & short duration training courses and hands-on workshops).
3. Undergraduate Skills Lab (which deals with the training of undergraduate students).
4. Miscellaneous programs (that include programs like visiting faculty, reproductive health and alumni affairs).

Since its inception in October, 2005 Professional Development Center has conducted CMEs & Miscellaneous Programs in collaboration with National & International Organizations, like PTC Foundation UK, American Heart Association, North Middlesex University Hospital, London, IMPACT Nepal, Amber Institute of California, INTER BURNS, INFORM, EMAME & EmONC, FALAH, US AID, UNFPA & WHO.

4.2. FACULTY DEVELOPMENTS PROGRAMS

The purpose of faculty development is to support and encourage the activities undertaken for development and professional growth of the faculty members of the Dow University of Health Sciences.

These initiatives are framed keeping in mind the University's Mission to create a culture of academic excellence. Furthermore, the teaching departments of the University are anchored on faculty continuous training and development.

I. FACULTY DEVELOPMENT WORKSHOP AT DOW INSTITUTE OF NURSING & MIDWIFERY (DION&M)

Four-days faculty development workshop organized by Dow Institute Of Nursing and Midwifery under the supervision of Ms. Rubina Hafeez in collaboration with Dow Institute of Health Professionals Education on "Health Professionals' Short Specialized Training Course". Honorable Pro Vice Chancellor, Prof. Dr. Nusrat Shah, and Director DIHPE, Prof. Dr. Syed Imran Mehmood, graced the Certificate distribution ceremony.

Faculty members from affiliated institutes were also invited to attend the workshop. The purpose of this workshop was to enhance the teaching strategies, introduce qualified health professional educationists, explore the issues of traditional learning and come up with the solution of serious traditional learning.

This informative workshop was divided into 8 different topics including:

- i. Traditional Lecture
- ii. Learning Objectives
- iii. Large Group Teaching
- iv. Small Group Teaching
- v. Teaching Strategies
- vi. Assessment And Evaluation
- vii. PowerPoint Presentation Standard Guidelines For Lecture
- viii. BCQS, SAQS ,Viva workshop



The workshop was to facilitate teachers to be sufficiently prepared, confident and competent for traditional teaching methods and in this manner achieve improved student learning. Participants were given a chance to share their experiences regarding challenges and barriers in the teaching and learning environment.

ii. HEALTH PROFESSION SHORT TEACHING CERTIFICATE COURSE-2022 AT DOW INSTITUTE OF MEDICAL TECHNOLOGY (DIMIT)

A faculty Development Training session “Health Profession Short Teaching Certificate Course” was conducted for teaching faculty of DIMIT from 14 to 18 Feb 2022 at Dow Institute of Medical Technology. Prof. Dr. Nusrat Shah pro-VC DIMC was invited as chief guest. This Course was awarded 15 CME credit hours. Professor Shahid Shamim was Course Director and facilitated arranging facilitators for the course. Ms. Shagufta Yamin was the Course Coordinator. The purpose of this course was to improve teaching skills and enhance the capabilities of the teaching faculty of DIMIT according to modern teaching methods and styles. This course was conducted for 5 days, from 9 am to 1:30 pm under the supervision of Director DIHPE Prof. Syed Dr. Imran Mehmood. Prof. Dr. Sameer Qureshi, Principal DIMIT has taken the initiative to start faculty development courses at DIMIT and provided continuous support for the course to be conducted smoothly. The certificate distribution ceremony was conducted on 9th March 2022 at Lecture hall # 2, DIMIT. 100 % attendance was mandatory for course participants for certificates. All the faculty members were awarded certificates and facilitators were awarded a token of appreciation.

Faculty Development Program
Dow Institute of Medical Technology

SHORT COURSE ON “HEALTH PROFESSIONS EDUCATION”

Teaching Excellence is our long-term goal

Course Details

Monday, 14 Feb (9:30-1:30)
LARGE GROUP TEACHING
Prof. Dr. Syed Imran Mehmood
OBJECTIVE WRITING
Assoc. Prof. Dr. Farhan Vakani

Tuesday, 15 Feb (9:30-2:30)
SMALL GROUP TEACHING
Dr. Syed Jaffar Abbas Zadi
LESSON PLAN
Ms. Shagufta Ishtiaq

Wednesday, 16 Feb (9:30-2:30)
ALIGNMENT OF COURSE BLUEPRINT/TOS
Prof. Dr. Shahid Shamim & Ms. Shagufta Ishtiaq

Thursday, 17 Feb (9:30-2:30)
ASSESSMENT-MCQ, SAQ & VIVA
Dr. Muneeza & Dr. Rubaba

Friday, 17 Feb (9:00-11:30)
ONLINE ASSESSMENT
Dr. Adnan & Ms. Shagufta Ishtiaq

Faculty Members:
Prof. Dr. Syed Imran Mehmood, Prof. Dr. Shahid Shamim, Dr. Syed Jaffar Zaidi, Assoc. Prof. Dr. Farhan Vakani, Dr. Adnan Sukkarwalla, Dr. Munizha Nisar, Shagufta Ishtiaq, Dr. Rubaba Azim

9:30 am | February 14 to 18, 2022

Lecture Hall # 3-Dow Institute of Medical technology- 3rd Floor, Nursing Building- Ojha Campus DUHS

FOR REGISTRATION:AFSHAN.ARZOO@DUHS.EDU.PK
+92 301 8638376

FACULTY & STAFF DEVELOPMENT

Dow Medical College, Department of ENT, Head & Neck Surgery

Prof. Muhammad Shuja Farrukh, Professor & HOD

- Conducted a workshop on Second Hands on Tracheostomy and Bronchoscopy at DMC, DUHS on 28th May 2022.

Dr. Sadaf Zia, Associate Professor

- First Tracheostomy, Utility, Care and Complication / Percutaneous tracheostomy & Bronchoscopy (Flexible & Rigid) workshop 3 & 4th March 2021.
- 3rd Cochlear Implant Workshop conducted at Dow International Medical College 26 Oct, 2021
- Second Hands on Tracheostomy and Bronchoscopy workshop conducted at DMC, DUHS on 28th May 2022

Dr. Danish ur Rahim, Assistant Professor

- Second Hands on Tracheostomy and Bronchoscopy workshop conducted at DMC, DUHS on 28th May 2022

Dr Irfan Ahmed Shaikh, Assistant Professor

- Second Hands on Tracheostomy and Bronchoscopy workshop conducted at DMC, DUHS on 28th May 2022.

Dow College of Pharmacy (DCOP)

Dr. Fakhsheena Anjum, Associate Professor

- Conducted seminar on “The arts and science in Pharmacy” at DCOP, in April 2022
- Conducted one day seminar on Career Pathways for Future Pharmacists on 13-11-2021

Dow College of Biotechnology (DCOB)

Dow College of Biotechnology conducted following guest speaker sessions within the department.

1. Lecture on “Bovine Lumpy Disease: Current Status and Way Forward to Therapy and Prevention”. Guest Speaker: Dr. Nazeer Hussain Kalhoro, Director General, Livestock Sindh (24th March 2022).
2. Lecture on “Computational Biology and Bioinformatics”. Guest Speaker: Prof. Dr. Zaheer-ul-Haq Qasmi, ICCBS, University of Karachi (30th October, 2021).

Institute of Business & Health Management (IBHM)

Ms. Yasmeen Bashir, Lecturer

- Conducted a 2 day workshop on DUHS Skill Enhancement Program (SEP) for the staff of DUHS.

Day 1: 2nd June, 2022 - Work Ethics, Positive Attitude & Workplace Happiness, Receptive Attitude

Day 2: 6th June, 2022 - Stress Management, Flexibility & Time Management, Self-Confidence.



4.3. RETURNED SCHOLARS (FOREIGN UNIVERSITIES)

Returned Ph.D. Scholars (Foreign Universities)		
7. Dr. Asma Khurshid	8. Dr. Rafat Amin	9. Dr. Naresh Kumar
10. Dr. Jawad Safdar	11. Dr. Sadaf Khan	12. Dr. Omer Mustapha
13. Dr. Kashif Shafiq	14. Dr. Syed Jaffar Abbas Zaidi	15. Dr. Mushtaq Hussain
16. Dr. Maheera Moin	17. Dr. Sonia Siddiqui	18. Dr. Samreen Memon
19. Dr. Mansoor Ahmed	20. Dr. Syed Imran Mehmood	21. Dr. Mohsin Wahid
22. Dr. Tehseen Fatima	23. Dr. Sadia Shakeel	24. Dr. Syed Saoud Zaidi
25. Dr. Muhammad Aamir Mirza	26. Dr. Muhammad Asif Qureshi	27. Dr. Muhammad Furqan Bari
28. Dr. Muhammad Sameer Qureshi	29. Dr. Muhammad Yahya Noori	30. Dr. Sumaira Nasim

31. Returned Scholars 2021-2022 (Present within the University): Sahar Soomro, DION&M, DUHS (MS)

After being selected for the prestigious “Swedish Institute Scholarships for Global Professionals” (SISGP), which is a fully-funded study scholarship for a Master’s programme in Sweden, Ms. Sahar Soomro graduated as a Swedish Institute Scholar with a Master’s in Public Health from Umea University, Sweden in 2022. Additionally, she was selected to speak at the graduation ceremony for the Swedish Institute Scholarship for Global Professionals held in the renowned Blue Hall within Stockholm City Hall, where Nobel Peace Prize Laureates give speeches after being awarded the Nobel Peace Prize. Ms. Sahar Soomro was chosen as the graduation ceremony speaker based on her message on “Leadership through Cultural Diversity and Women Empowerment.” The Swedish Institute Scholarship for Global Professionals granted Ms. Sahar the prestigious opportunity to pursue a Master’s in Public Health from Umea University, which she completed and graduated from this past June, 2022. (Website posting:

<https://si.se/en/i-would-love-to-implement-practices-of-recycling-waste-in- every-household-in-pakistan-2/>)



4.4. PRESENT SCHOLARS - ENROLLED IN PHD PROGRAMS

Present Scholars Within the University, Ph.D. programs		
S #	Name	Specialty
1.	Naheed Khan	Anatomy
2.	Khalida Parveen	Anatomy
3.	Mahrukh Qasim	Anatomy
4.	Syed Inayat Ali	Anatomy
5.	Sahar Mubeen	Anatomy
6.	Iffat Raza	Anatomy
7.	Sahar Iqbal	Chemical Pathology
8.	Ashar Afaq	Community Dentistry
9.	Shazia Jabbar	Gynae & Obs
10.	Tazeen Mustansar	Histopathology
11.	Durr-e-sameen	Histopathology
12.	Ruqaiya Shahid	Histopathology
13.	Farheen Sultan	Histopathology
14.	Rubina Gulzar	Histopathology
15.	Bushra Sikandar	Histopathology
16.	Uzma Bukhari	Histopathology
17.	Ambreen Fatima	Medical Microbiology
18.	Muhammad Masroor	Medicine
19.	Fatima Fasih	Microbiology
20.	Saima Naseem	Microbiology
21.	Arshad Hasan	Operative Dentistry
22.	Amynah Charania	Oral Biology
23.	Sofia Ali Syed	Oral Pathology
24.	Anwar Ali	Oral Surgery
25.	Shaheen Ahmed	Oral Surgery
26.	Fuad Shaikh	Pharmacology
27.	Nighat Rukhsana	Physiology
28.	Malik Tajuddin	Public Health

29.	Muhammad Tahir Rizwan Khan	Public Health
30.	Mazhar Iqbal	Public Health
31.	Zeeshan Noor Shaikh	Public Health
32.	Syeda Kanwal Aslam	Public Health
33.	Qamar Saeed	Public Health
34.	Nabil	Public Health
35.	Ambreen Qamar	Physiology
36.	Muhammad Adeel Ahmed	Operative Dentistry
Present Scholars within the University (Induction year 2021)		
1.	Sana	Public Health
2.	Umm-e-Rabab	Public Health
3.	Haji Sohail	Public Health
4.	Zulfiqar Ali Shaikh	Public Health
5.	Mehveen Iqbal	Medical Microbiology

4.4.1. IPFP SCHOLARS

IPFP Scholars present in the university in 2021-2022:

Faculty Name	College/Institute
Dr. Hina Asrar	Dow College of Biotechnology
Dr. Dania Ahmed	Dow College of Biotechnology
Dr. Marriam Yamin	Dow Institute for Advanced Biological & Animal Research
Dr. Urooj Javed	Dow College of Biotechnology
Dr. Muhammad Usman	Dow Institute for Advanced Biological & Animal Research

4.5. PDC PROFESSIONAL DEVELOPMENT PROGRAMS

Healthcare Professional & Other Faculty Trained by Professional Development Center at DMC & Ojha Campuses.

S. #	Title of Training	No of Workshops	No. of Participants	Audience Type (student /faculty /staff)
1	CPR and Choking	1	28	RMOs
2	Basic Life Support (BLS) (AHA)	49	248	All
3	Basic Surgical Skills	28	352	HOs
4	Basic ICU Skills	5	405	HOs
5	Basic Ilizarov Workshop	1	11	RMOs PGs
6	Neonatal Resuscitation Program	1	16	All
7	Ponseti Technique	1	13	RMOs PGs
8	Core Skills GYN Hysteroscopy & Laparoscopy	1	23	All
9	Maternal Collapse	1	42	PGs
10	WHO Intrapartum Care Guide	1	36	All
11	Postpartum Family Planning (PPIUCD)	2	51	All
12	First Aid	2	22	Staff
13	Emergency Obstetric & Neonatal Care (EmONC)	1	28	RMOs PGs
14	Advanced Laparoscopic Skills & Gut Anastomosis	1	7	HOs
15	Basic Biostatistical Methods & Data Analysis in Biomedical Sciences	1	7	HOs
2 day Workshop/ Training/ Professional Skills Development at DMC Campus				
16	Advanced Cardiac Life Support (ACLS) (AHA)	7	35	All
17	Instructor Course Pediatric Advanced Life Support (PALS) (AHA)	1	5	Faculty
18	Pediatric Advanced Life Support (PALS) (AHA)	5	28	All
19	Preparatory Course for FCPS / MS Part-II Examination TOACS Short & Long Case	1	33	RMOs PGs
3 day Workshop/ Training/ Professional Skills Development at DMC Campus				
20	Baby Friendly Hospital Initiative (BFHI)	4	44	Nurses & Paramedics
6 day Workshop/ Training/ Professional Skills Development at DMC Campus				
21	Integrated Management of Childhood Illness (IMNCI)	1	22	RMOs PGs HOs
	Total	115	1456	

Workshops/ Trainings/ Professional Skills Development at Ojha Campus				
1	CPR and Choking	2	40	RMOs
2	Basic Surgical Skills	4	109	All
3	3 rd Cochlear Implant Workshop	1	44	HOs
4	Course on Cardiology Refresher	1	29	HOs
5	Competence By Design	1		RMOs PGs
6	Dental Implants	1	27	All
7	"Direct & Indirect Veneers Preparation"	1	70	RMOs PGs
8	"Hysteroscopy & Gynecological Workshop"	1	25	All
9	Obstetrics Refresher Workshop	2	92	PGs
10	"Health Professional's Short Teaching Certificate Course (HPSTCC)"	1	19	All
11	Pakistan Aspirin Foundation & GO RED for Women Pakistan Cardiac Society (PCS) & American Heart Association (AHA) organized CARDIO-OBSTETRICS CONFERENCE	1	25	All
12	"Health Professions Education (CHPE)	2	80	Staff
13	Primary Trauma Care Workshop	1		RMOs PGs
14	Modern Approaches to Teaching and Learning	1	20	ALL
	Total	20	580	



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CHAPTER 5

Access

5.1. BASIC ENROLLMENT

Total Student enrollment during FY 2021-2022 is **7856** for graduate, post-graduate and diploma programs offered, including FCPS.

5.2 EQUITY

In Dow University of Health Sciences, admissions are granted on transparent open merit basis for all applicants, regardless of gender, sex, race or ethnic background.

5.3 GENDER-WISE DETAIL

Enrollment for the Period of 2021-2022, DUHS				
Institute Name	Programs	Male	Female	Total
Dow Medical College	MBBS	534	1136	1670
Dow Dental College	BDS	30	166	196
School of Postgraduate Studies	Master of Surgery	23	1	24
	Doctor of Medicine	26	14	40
	FCPS-II	484	135	619
	Diploma	15	30	45
Sindh Institute of Physical Medicine & Rehabilitation	DPT	49	235	284
	BS Occupational Therapy	8	48	56
	BS Prosthetics & Orthotics	6	15	21
	MS Advanced Physiotherapy	4	17	21
Dow Institute of Physical Medicine & Rehabilitation	DPT	25	187	212
	MS Advanced Physiotherapy	1	11	12
Dow International Medical College	MBBS	311	417	728
Dow International Dental College	BDS	37	175	212
Dr. Ishrat-ul-Ebad Khan Institute of Oral Health Sciences	BDS	68	351	419
	MDS	52	71	123
	MSc. DS	6	7	13
School of Dental Care Professionals	BS Dental Care Professional	12	105	117
Dow College of Pharmacy	Pharm-D	109	669	778
Dow College of Pharmacy	MPhil Pharmaceutical Sciences	2	11	13

Dow Institute of Medical Technology	BS Medical Technology	54	349	403
Department of Ophthalmology and Visual Sciences	BS Optometry	9	78	87
Institute of Business & Health Management	BBA	118	157	275
	MBA	18	41	59
	EMBA	16	18	34
Dow Institute of Nursing & Midwifery	BS Nursing	156	189	345
	Post RN BS Nursing	85	36	121
	Post RN BS Midwifery	0	24	24
	MS Nursing	10	15	25
Dow Institute of Radiology	BS Radiologic Technology	9	68	77
	Diploma in Medical Radiology	1	11	12
	Diploma in Echocardiography	4	4	8
School of Public Health	BS Nutrition	2	146	148
	Master of Public Health	12	38	50
	MS Public Health	1	6	7
	MS Biostatistics & Epidemiology	5	18	23
Dow College of Biotechnology	BS Biotechnology	50	336	386
Institute of Biomedical Sciences	MPhil	10	56	66
	PhD	16	26	42
Institute of Health Professionals Education	Master of Health Professional Education	16	35	51
National Institute of Diabetes & Endocrinology	MSc. Diabetes & Endocrinology	4	2	6
Ojha Institute of Chest Diseases	Diploma in Tuberculosis & Chest Diseases	1	3	4
Total		2399	5457	7856

5.5. EMPLOYABILITY

The graduates of Dow University of Health Sciences are serving in almost all prominent health care institutions & organizations of Pakistan, as well as at international levels. Some major employers of DUHS graduates include the following:

- Private Hospitals locally, nationally and internationally.
- Public & Private Sector Medical Colleges & Universities
- Multinational and Private Limited companies

- National and Multinational Pharmaceutical Companies
- Manufacturing industry
- Entrepreneurial ventures
- Health Insurance companies
- Banking and Finance Sector

5.6. FACULTY-STUDENT RATIO

In the year 2021-2022, the faculty-student ratio is calculated as follows:

Faculty-Student Ratio	
Total Number of Faculty	942
Total Number of Enrolled Students	7856
Faculty-Student Ratio of University	1 : 8



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CHAPTER 6

Universities Building Economies

6.1. UNIVERSITY – INDUSTRY LINKAGES

Dow University of Health Sciences, Karachi is dedicated to building collaborations and linkages with various national and international industries and is still engaged in the process of enhancing strong linkages.

- Dow University of Health Sciences has developed university industry linkages with several pharmaceutical companies for Research and development.
- Dow University has an agreement with the National Research Program for Universities, which is a National program.
- The University enhanced its industry linkage by signing a MOU with the international organization, DICE Foundation. It will act as a pragmatic platform for health related innovation & for collaboration among academia, industry, government, entrepreneurs and Expatriate community on all matters pertaining to the growth of the health sector in Pakistan.

6.2. INITIATIVES

1. The National Institute of Diabetes & Endocrinology provides a fellowship in the field of Endocrinology.
2. The satellite center of MALIR became fully functional with well-equipped MRI, CT Machines
3. Evening ultrasound services offered in DIR, LEJ and Nazimabad campuses.
4. Oral & Maxillofacial Surgical Unit approved from College of Physicians Surgeons of Pakistan in February 2021 as Fellowship Training Unit at DDC.

5. Dow Center of Oral Health Research (DCOHR) Lab at DDC

DUHS is a pioneer in research and innovation. The various institutes and departments of DUHS associated with research are spearheading the local and national research front.

The center of the dental research lab was established on the 7th floor of Dow Dental College. It is the first advanced dental research center in the province.

The post-graduate students from DUHS look at other avenues when equipment such as Scanning Electron Microscope is needed. In order to fulfill this research need, an advanced research DCOHR lab dedicated to dental research was envisioned.

Aim:

The aims and objectives of this center are as follows

1. To fulfill research needs of the oral health and medical researchers.
2. To provide a center for research activities at the DMC campus.
3. To train the researchers in cutting edge research techniques.
4. To commercialize the services offered by the center.

5. To build collaborations with research centers and industry nationally and internationally.

Structure:

The Research Center has the following research facilities/equipment available.

1. Bio-Materials Research Lab

- Scanning Electron Microscope (SEM) with EDS
- Universal Testing machine (UTM) (Tensile, flexure, compressive and tear strength)
- HPLC
- Thermal Cycler (For thermal aging of samples)
- UV spectrometry
- Stereo-Microscope
- Saw Microtome



The Bio-materials side of the lab is fulfilling an important research need of the scientific community. Its importance can be gauged from the fact the SEM installed in the lab is only the third such microscope in Karachi after NED university and PCSIR available for research purposes. In addition, the Universal testing machine is a first of its kind for any educational institute.

2. Molecular Research lab

- Cell Culture Lab
- Microbial Culture lab
- Molecular Pathology lab
 - Conventional PCR
 - ELISA
 - Horizontal Gel Electrophoresis
 - Vertical Gel Electrophoresis
 - Western Blotting
 - IEF Two Dimensional Electrophoretic Protein Analysis

6. November, 2021: Green Youth Movement Club inaugurated at School of Public Health, Dow University of Health Sciences

The Green Youth Movement (GYM) Club, which is a Prime Minister initiative for a safe and clean environment in Pakistan, was officially inaugurated at School of Public health, Dow University of Health Sciences, Karachi. Mr. Mustafa Nangraj, Director Information, Agriculture Extension, Sindh Hyderabad & Deputy Program Coordinator Nutrition Sensitive Agriculture was invited as a guest speaker to highlight the importance of linking Modern Agriculture practices with human Nutrition. Dr. Sumaira Nasim, focal person of GYM-Club at SPH gave an overview of GYM current and future activities. She also emphasized incorporating kitchen gardening skills in undergraduate nutrition curriculum. Event was chaired by Prof. Dr. Zarnaz Wahid, The Pro Vice Chancellor, Dow University of Health Sciences, Prof. Dr. Sumbul Shamim Focal Person, GYM, HEC and Ms. Nida Jawed, Program Director, faculty members and students were present on the occasion. Prof. Dr. Kashif Shafique, Principal, School of Public Health (SPH) briefly overviewed the different programs and research activities at SPH. Students from third year of Food & Nutrition discipline at Dow University of Health Sciences Official - Ojha Campus, displayed their innovative projects. For instance, one group came up with a concept called Orgoserve that is making biodegradable/compostable plates out of fruit and vegetable peels. The innovation came in order to put a complete stop on using products made of plastic to avoid pollution.



6.3 BUSINESS INCUBATION CENTER

Vision:

To be a center of excellence that nurtures linkages between academia and the industry that fuels entrepreneurial spirit and inculcates research bent of mind in the region and contributes to national economic development.

Mission:

- DUBIC will build an ecosystem to support innovative ideas in the region with an environment to enact wealth and create employment opportunities through successful startups
- To create entrepreneurial opportunities for students, faculty and researchers
- To support technology entrepreneurship in health sciences emerging technologies by mobilizing the resources of DUBIC

- To create opportunities and identify key areas for the community based business ventures and campaigns.
- To assist in the commercialization of innovative ideas through capacity building and networking

Values:

The BIC-DUHS identifies following key values to guide its decisions and operations

- **Customer Service:**
To respond, be aware and understand.
- **Excellence:**
Be the best and commit to exceptional quality and service
- **Innovation:**
Encourage creative thinking, imagine, create and share
- **Teamwork:**
Engage and collaborate
- **Integrity and Leadership:**
Be a role model and influence others to achieve their best
Have the courage to do the right thing
Take bold and visionary initiatives
Hold yourself and others accountable
- **Respect and Collegiality:**
Be kind
Listen to understand
Value different opinions

Programs and Services

Business plan competition for the selection of Startups

It has been a routine practice for BIC-DUHS to collaborate with various organizations and organize an annual Business Plan competition.

The Dow University Business Incubation center has clearly defined its selection criteria for the start-ups and ensures strict compliance; therefore BIC has devised a stringent process for incubating ideas.

Workshops, Seminars and Training programs

Training and development is the core function of BIC. For this purpose BIC extends its linkages and invites professional trainers with expertise on the relevant topics. All sessions are conducted in the designated training room of the BIC.

Steps	Event	Execution	Focal	Duration/Timeline
1	Orientation	At Faculty Level for the purpose of outreach of BIC	Manager BIC	Launch of Annual BPC

2	Application	Online/Nominations		2 weeks
3	Idea Assessment (Faculty Level)	In person		3 days
4	Acceleration Camp with 3 workshops as approved	60 Participants		3 days
5	BPC	Annual		1 day

Key Areas for Training and development:

- Business Model Development Market Research
- Product positioning
- Build a Brand/Blue Ocean Strategy
- Logo & Designing
- HR/Team Building
- Marketing- The Practical Approach Art of Selling
- Startup Finance
- Art of Pitching and Fundraising
- Business Writing Skills
- Workplace Ethics

Mentorship

Mentoring is another function of BIC DUHS at the advanced level. For this purpose market experts are invited to BIC for mentoring the startup companies on different issues. Generic as well as specific mentoring sessions are conducted throughout the incubation period. Another concept has been introduced called Junior Mentors, in which BIC invites founders and co-founders of different startups who have already been through the incubation in different incubation centers. Junior mentors share their real life experience and stories of survival and thus is very fruitful as incubated companies can easily connect with the junior mentors.

Mentoring Points

Is the team set up correctly?

Passion and seriousness of team members

How can the startup be more successful?

Is the demand realistic?

Is the revenue stream sufficient to sustain the startup?

Is the startup market strategy properly planned?

What are the next steps for the Startup?

Coaching

Coaching is another important function of BIC DUHS in which commences after one month of incubation. Coaches are assigned to each startup keeping in view the nature and domain of the startups. Coaches are market experts or faculty members who have relevant market experience and knowledge to give a strategic direction to the startups. For each cohort one or two coaches are selected on the basis of the number of startups and startup profiles.

6.4. PATENTS/TRADEMARKS

ORIC-DUHS is a notified TISC; therefore it has been responsive to all the matters related to intellectual property, such as patents, trademarks or company registrations. Dow University of Health Sciences is engaged in the process of trademark registration by the University Legal Consultant.

The registered trademarks of Dow University of Health Sciences are as below:

S #	Name of Lead Inventor	Title of Invention	Status	Date
1.	DUHS	An indigenous strain of <i>Aspergillus niger</i> (BERG-17) and its Application in Citric Acid Production	National	09 th Feb, 2022
2.	Dr. Muhammad Raza Shah Dr. Talat Roome	Polyacrylonitrile based electrospun nanofibers loaded with Zinc Oxide-Quercetin nanoparticles for wound healing	International	Jan 2022

S. #	App. #	Class	Trademark	Date	Status
1	308949	44	DOW	21/10/14	Registered
2	344473	5	Shaffaf (Logo)	05/08/13	Registered
3	344474	32	Riva (Label Mark)	05/08/13	Registered

Following Patents are applied for Grants:

S #	Name of Lead Inventor	Title of Invention	Status	Date
1	Dr. Mushtaq Hussain	Filed on multivariate mRNA Vaccine Construct	National	29/4/2022
2	Dr. Talat Roome	Licensing for Preclinical Contract Laboratory	National	24/5/2022

6.5. INTERNSHIPS AND PLACEMENT OFFICE

Clinical Electives In the recent years, there is an increasing interest of the final year students of Medicine for doing electives in different medical schools/hospitals in the United States. The Quality Enhancement Cell, QEC-DUHS, is also responsible for developing collaboration and linkages with other universities and colleges around the globe in different areas of interest. DUHS has developed a Memorandum of Agreement with one of the prestigious foreign Medical Schools and associations for clinical electives namely:

Associations of DUHS for clinical electives with the following colleges	
University of Illinois	Chicago
AAMC	Visiting Students VSLO Learning Opportunities
1. Jackson park hospital, Chicago.	Clinical Electives offered at various National & International Hospitals
2. Holyoke Medical Centre, MA	
3. Mayo Clinic, Rochester USA.	
4. Mount Sinai Hospital, New York.	
5. Specialty hospital of Washington.	
6. Harvard Medical School, Boston USA.	
7. North West General Hospital, Peshawar	
8. Robert Wood Johnson University Hospital. New Jersey.	
9. Harrison County Hospital, Corydon, USA.	
10. Winnie Palmer Hospital, Florida USA.	
11. Florida International University, USA	

Internships

The Placement office of each College/ Institute or School ensures the student secures a placement, which will support their learning requirements and nurture their professional development.

All work placements must be officially approved by the Registrar-DUHS and primarily involve the process of CV selection and competitive interview (if necessary) by the HoD/ Principal or Director, but can also be secured by direct matching if the student applies directly. The selection process is determined by the host organization. The Placement coordinator provides both group and one-to-one support to the students in the researching, sourcing, securing of placement and ongoing support of students whilst on internship or placement.

We are fully conscious of the utility of earning practical experience for students by undergoing internship(s) during their studies and after completion of their studies. Interning in a field of choice will stand out on students' resumes and help them with their job search after graduation. Students/interns should endeavor to gain on-the-job training that integrates education and career development; while organizations and companies hosting interns also benefit from the contributions of creative and innovative students. Students' networking during the course of their internship subsequently become professional "contacts" who can help guide their career path as they make their way into the professional world.

Dow Institute of Physical Medicine & Rehabilitation provide electives to students from Ziauddin College of Rehabilitation Sciences, People's University of Medical and Health Sciences for Women, and Liaquat University of Medical & Health Sciences.

Graduates of **Dow College of Pharmacy** find placements in Liaquat National Hospital, NICVD, AKUH, Kiran hospital, Dr. Ziauddin Hospital, Indus Hospital and Dr. AQ Khan Institute of Behavioral Sciences. The Placement office of DCOP facilitated the screening activity of students for placement at Martin Dow.

Dow Institute of Medical Technology provide internship to graduates at Dr. Ruth Pfau hospital Karachi, South City Hospital, NICVD, Dow University Hospital, Memon Medical Institute, Aga Khan University Hospital, Liaquat National Hospital, Essa Lab, Shaukat Khanum Laboratory, LUMHS laboratory, Dow Diagnostic and Reference Laboratory, Hussaini Blood Bank, SMBB Institute of Trauma, Anatolia Gene Products (Turkey), Allmed, SZABIST, University of Karachi, Dr. Panjwani Center for Molecular Medicine and Drug Research, Dadabhoy Institute of Higher Education, Red Crescent, Dow University of Health Sciences, Aga Khan University and Liaquat National Hospital

Institute of Business & Health Management provides in-house internships of six months duration to ensure that the students secure a placement that will support their learning requirements and nurture professional competence.

School of Public Health: A profound and comprehensive internship has been devised for BS Nutrition students in their final semester. This internship program has been developed to provide students with hands-on experience of dealing with clinical and therapeutic scenarios in hospitals. Students are supposed to complete 12 credit hours which require them to be working 6 days a week (Monday to Saturday). During these hours they are required to complete the assigned tasks along with a minimum of 80% attendance. Following are a comprehensive detail of the rules and responsibilities. Our Internship program for graduate students in Public health organizations and clinical settings provide opportunities for capacity building around the SDGs goals of Pakistan. Following are the organizations our students completed their internships.

Public Health Organizations	Clinical Dietetics
Nutrition Support Program-(NSP) Sindh	Aga Khan University Hospital
Water and Sanitation Hygiene (WASH)	SIUT
People's Primary Health Care Initiative (PPHI)	Patel Hospital
	National Medical Center (NMC)

	Fatimiyah Hospital
	Indus Hospital
	Dow University Hospital

The students are being provided with a monthly stipend as per policy and as well as an internship certificate at the end of internship period.

Benefits of Internship for Students

The placement department offers paid internships for 6 months to graduates, who have applied for the internship and are selected by the placement committee. They benefit from the internship and are placed in different departments of DUHS after the approval of the Registrar, DUHS. The duration of internships are from May-October, according to the duty roster which was designed on rotational basis (2 months), was handed over the interns, before going to their relevant departments such as Registrar Head office, Finance, HR, OPD, Radiology, IHM and DDRRL. The purpose of offering those internships was to increase their career related knowledge and provide them valuable work experience.

DUHS CAREER FAIR 2022

The Department of Alumni and Marketing Communication-DUHS hosted the first DUHS Career Fair on March 2 and 3, 2022 with the sponsorship of more than 30 companies. Pharmaceutical, Education consultants, Pharmacies and other health service companies were there to recruit students and graduates from different medical and allied health sciences fields. Career Guidance sessions on Career Growth, Capacity Building, Business ideas, CV Writing and Interviewing and Vocational Training were also arranged in the career fair to help individuals acquire the knowledge, skills, and experience.



DOW UNIVERSITY OF HEALTH SCIENCES

DUHS CAREER FAIR ★2022
THIS MUST BE THE PLACE

March 2 & 3, 2022 at Ojha Campus
9am to 3pm

Networking & Placement Opportunities
for DUHS Students & Alumni:
Meet Leading Employers, Foreign
Universities & Associations.

DUHS Students & Alumni
Free Registrations are now open:
<https://bit.ly/DUHSRegistration22>

Register by
February 25, 2022

For further information: alumni@duhs.edu.pk
Department of Alumni & Marketing Communications



DOW UNIVERSITY OF HEALTH SCIENCES

CAREER FAIR ★2022
THIS MUST BE THE PLACE

**CAREER GUIDANCE SESSIONS
OPEN FOR STUDENTS AND GRADUATES**

SESSION 1:
CAREER DEVELOPMENT: REALIZING YOUR POTENTIAL
March 2, 2022 - 2 pm to 3 pm
Fouzia Rehman, Student Counselor, Counseling Office, DUHS
Areeba Rehman, Student Counselor, DIMC DUHS
Venue: Hall 1, Dow College of Pharmacy

SESSION 2:
CAPACITY BUILDING INITIATIVES OF IBHM
March 3, 2022 - 0930 am to 1030 am
Dr. Zahra Nazim, Assistant Professor, IBHM
Venue: Hall 1, Dow College of Pharmacy

SESSION 3:
CV WRITING AND INTERVIEWING SKILLS
March 3, 2022 - 1030 am to 1130 am
Dr. Ume Amen, Assistant Professor, HoD Management Department, IBHM
Ms. Yasmeen Zehra, Lecturer & Patron CSSS & GYM Club
Venue: Hall 2, Dow College of Pharmacy

SESSION 4:
CAREER GROWTH & PROGRESSION
March 3, 2022 - 1130 am to 1230 pm
Syed Farhan Mahmood, Director Human Resource, DUHS
Venue: Hall 1, Dow College of Pharmacy

SESSION 5:
DO YOU HAVE A BUSINESS IDEA? TAKE BENEFITS FROM DUHS BUSINESS INCUBATION CENTER
March 3, 2022 - 1230 pm to 0130 pm
Muhammad Musab Khan, Manager Business Incubation Center, ORIC, DUHS
Venue: Hall 2, Dow College of Pharmacy

SESSION 6:
VOCATIONAL TRAINING & KAMYAB JAWAN MARKAZ AT DUHS
March 3, 2022 - 0130 pm to 0230 pm
Farhan Khan, Manager Dow Vocational Training Center, and Kamyab Jawan Markaz
Venue: Hall 1, Dow College of Pharmacy

marketing@duhs.edu.pk



6.6. STUDENT COUNSELING AND CAREER GUIDANCE

DUHS Counseling Services for Students available at ION, Ground Floor, OJHA Campus and DMC, PDC building 1st floor.

If students are experiencing any of the following, DUHS has a provision for counseling services offered to our students.

- Counseling may offer them safe and confidential non-judgmental support for their learning needs.
- A safe place to learn to be them, with holistic health counseling for their well-being
- Academic issues and stress/anxiety, time management
- Family related issues.
- A response to their learning disabilities or learning issues.
- Helping them to navigate change in their lives
- Issues with friends and other relationships

Furthermore, a student's Counseling Cell has been inaugurated by the Vice Chancellor DUHS, Honorable Prof. Dr. Saeed Quraishy on the occasion of World Mental Health Day at the Dr. A. Q. Khan Center, Institute of Behavioral Sciences exclusively for Dow Students, where they can get free of cost further extensive treatment and services. The Student Counseling Services are provided at the departmental level regarding academics, personnel or group counseling, crisis assessment/ management, career exploration and professional training guidelines. Student counseling is also offered through the official mentoring program at the Departmental/Collegiate level. Student Counseling involves meeting with and seeking

help from a trained professional who can help you identify your strengths, weaknesses and interests regarding academic/career matters and also offer emotional support and guidance.

The Dow University of Health Sciences has hired an experienced Psychologist for student counseling services to be offered for its students. The professional has knowledge of student counseling/career guidance to students with a variety of issues, ranging from behavioral issues to career preparation. The professional will assist the students with Career and Academic Development and work directly with students to develop academic and career related solutions.

The Institute of Physical Medicine and Rehabilitation IPM&R has a well-organized mentoring system at the department to provide counseling, guidance and appropriate suggestions to students to rectify their academic, personal and other issues to improve the quality.

There are two modes of student counseling available within the University:

- Educational and Career counseling.
- Personal or Psychological counseling is being provided by professional psychologists through A. Q Khan Center Center for Behavioral Sciences.
- Academic or career counseling is being provided by faculty members.
- Batch counselors are allotted, who look after the whole batch and provide all kinds of counseling regarding student progression, selection of electives and participation in curricular and co-curricular activities.

Student-teacher interaction also helps us ascertain students' need for career counseling. Teachers and management personnel are always available to the students to hear their queries. Additionally, Dow College of Pharmacy has developed a system of mentoring, which may serve as a platform for addressing the needs of the students. Other Colleges & Institutes also have a well-developed mentoring system. In the mentoring system of DUHS, there are assigned mentors for every 20 students and a chief mentor to lead all the mentors. Apart from this they also periodically organize career counseling sessions in which experts from the industry are invited to guide students.



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CHAPTER 7

Strengthening Physical Infrastructure

Directorate of Planning & Development

The Department of Planning and Development of Dow University has completed renovations and refurbishments of the old Dow Medical College and a number of old buildings and infrastructure at the Ojha campus.

7.1. DEVELOPMENT PROJECTS (LABORATORIES, LIBRARIES ETC.)

Following development projects are being implemented at Dow University of Health Sciences.

S #	Project Title	Funded by	Status
1.	Establishment of An Advanced Molecular Genetics And Genomics Diseases Research and Treatment Center (Ojha campus)	PSDP	Completed
2.	Establishment of Trauma Center, BSL-3 Lab and Provision of support services at Institute of Chest Diseases Ojha Campus of Dow University of Health Sciences, Karachi	ADP	Ongoing
3.	Establishment of Department of Serobiological and providing power generation by gas along with heat recovery system at Ojha campus of DUHS, Karachi	ADP	Completed
4.	Dow International Dental College and 50 Bedded Hospital in Gulistan-e-Johar, Gulshan-e-Iqbal Town, Karachi.	ADP	Completed
5.	Sindh Infectious Diseases Hospital & Research Centre At NIPA, Gulshan-e-Iqbal, Karachi	ADP	Ongoing
6.	Gamma Knife Radiosurgery Centre	ADP	Completed
7.	Provision of Linear Accelerator with Integrated High Field MRI System in Sindh	ADP	Ongoing
8.	Establishment of Biosafety Lab (BSL-III) at Sindh Infectious Diseases Hospital & Research Centre at Karachi	ADP	Ongoing

i. PUBLIC SECTOR DEVELOPMENT PROGRAM PROJECTS:

1. ESTABLISHMENT OF AN ADVANCED MOLECULAR GENETICS AND GENOMICS DISEASES RESEARCH AND TREATMENT CENTRE AT OJHA CAMPUS, DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI.

The goal of Establishment of an Advanced Molecular Genetics and Genomics Diseases Research and Treatment Centre is to provide a world class sustainable and multidisciplinary cutting-edge genomic facility that will bring together academia and health care providing sectors of the country together to provide genetic testing and advanced therapeutic modalities using genetic approaches leading to the broader concept of 'Personalized Medicines' in future. It will also generate high quality tasks for the field by providing graduate and post-graduate education

that will promote national knowledge-based economy through applied genomics research outcomes.

The project falls under the head "Research & Development" funded by Higher Education Commission. The project is a part of overall vision / perspective plan of the Dow University of Health Sciences, Karachi which is in line with the government priorities for the development, expansion, up-gradation and improvement of essentially required infrastructure and research facilities at Public Sector Universities and degree awarding institutions. The project's duration is 2 years i.e. 2020-2022 and is completed with a cost of **Rs. 404.128 M.**

ii. ANNUAL DEVELOPMENT PROGRAM SCHEMES:

1. ESTABLISHMENT OF TRAUMA CENTER, BSL-3 LAB AND PROVISION OF SUPPORT SERVICES AT INSTITUTE CHEST DISEASES OJHA CAMPUS OF DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

The On-going project will help to improve the health care services for the seriously injured and trauma patients round the clock, especially at the time of major road / air / sea accidents, bomb blasts and natural calamities like heavy rains, cyclones & hurricanes etc. The total cost of the project is amounting to Rs 681.284 M (Rupees Six Hundred Eighty One Million & Two Hundred Eighty Four Thousand only) i.e. Capital Rs. 297.580 M & Revenue Rs. 383.704 M. The expenditure incurred till August, 2022 is 394.670 M. The capital component of scheme has been completed. However, at the Trauma Centre only the procurement of equipment is in process now. The Entire building of the Trauma Centre is equipped with the latest HVAC system.

2. ESTABLISHMENT OF DEPARTMENT OF SERO BIOLOGY AND PROVIDING POWER GENERATION BY GAS ALONG WITH HEAT RECOVERY SYSTEM AT OJHA CAMPUS OF DUHS, KARACHI

The subject ongoing scheme is a mix of preventive, curative, education and research services. Structure is completed and only supply of medical equipment is in process The Serology Department will have an animal serology laboratory which will produce various immunoglobulin and antibodies for various human diseases and ailments. Human serology laboratories will be capable of diagnosing various diseases. The Serology Research and development unit will be a helping hand for production and diagnostic laboratories.

In Pakistan, there is no single serology institute which could produce indigenous quality sera for sero therapy, diagnosis and reference. Indigenously produced sera is very cheap, economical and local production will not only save foreign exchange in billions of Pak Rupees, but also provide opportunity for employment. Total cost is 410.265 M and the project is completed and fully functional.

3. DOW INTERNATIONAL DENTAL COLLEGE AND 50 BEDDED HOSPITAL IN GULISTAN-E-JOHAR ,GULSHAN-E-IQBAL TOWN, KARACHI

Dow International Dental College and 50 Bedded Hospital is ground plus two buildings. Ground Plus 1st floor is reserved for hospitals affiliated with Dow International Dental College and second floor reserved for departments of basic sciences. Since its inauguration, patients of

Covid have been admitted in all 4 waves of Covid-19. Between the second and 3rd wave it was used as Covid mass vaccination center 24/7.

For the time being free consultation clinics are carried out in Internal medicine, gastroenterology, diabetes, urology, neurosurgery and Gynae with free facilities of sugar testing, ECG and x-ray. It has a functional pharmacy and Dow lab collection point.

4. SINDH INFECTIOUS DISEASES HOSPITAL & RESEARCH CENTRE AT NIPA, GULSHAN-E-IQBAL, KARACHI

Sindh Infectious Diseases Control Hospital and Research Center at Nipa, Gulshan-E-Iqbal Karachi is available round the clock for patients suffering from corona virus and other infectious diseases. Thus, it served as a center in prevention and control of existing & emerging infectious diseases. The facilities of all major infectious disease control and General OPD, indoor and emergency treatment facilities are available round the clock. In the first phase, a 200-bedded hospital housed in Block-A and B has been completed. It was visited and inaugurated by the Sindh Chief Minister on 5th July, 2020.

5. GAMMA KNIFE RADIOSURGERY CENTRE

The project was approved during March 2020. And now the project is completed and functional and it is in accordance with the Provincial Health initiatives to provide quality and advanced Health Care facilities to the people of Sindh particularly and all over Pakistan. The project will go a long way in the treatment of Neurosurgery Cancer Patients. The existing gamma knife radiosurgery Cancer unit provides comprehensive and modern, quality treatment to the patients suffering from Cancer. It is also serving as a Research base to find solutions to problems pertinent to cancer patients, ultimately serving as a nucleus for the control of cancer in the province of Sindh and all over Pakistan. Presently 110 cancer patients have been treated and benefited since 12th August 2021 till now.

The procedure of the Gamma Knife is a pain free, bloodless and day care treatment which is highly targeted and accurate treatment. Gamma Knife radio-surgery was used to treat certain conditions of the brain, many of which could only be treated by open surgery. This is the first such intervention at a public sector hospital in Pakistan. 400 units of this machine have been installed all over the world and this is the first gamma knife Radiosurgery Centre which is operational at Dow University Radiosurgery Centre.

6. PROVISION OF LINEAR ACCELERATOR WITH INTEGRATED HIGH FIELD MRI SYSTEM IN SINDH

The Project is in accordance with the Provincial Healthcare Initiatives to provide quality and advanced healthcare facilities to the cancer patients of Sindh, in specific and all over Pakistan, in general. MRI-Linear accelerator (MR-LINAC) is a powerful device with MRI facilities for real time imaging and linear accelerator for focused beams of radiation.

7. ESTABLISHMENT OF BIOSAFETY LAB (BSL-III) AT SINDH INFECTIOUS DISEASES HOSPITAL & RESEARCH CENTRE AT KARACHI

There is a steady increase in both the numbers of laboratories and scientists handling emerging viruses for diagnostic and research. The potential for harm associated with work with these infectious agents can be minimized through the application of high containment facilities.

BSL-III facilities are needed for the safe manipulation of such agents. Moreover activities involving high concentrations of live SARS-COV-2 virus, or large volumes of infectious samples should be performed in no less than a BSL-III environment.

7.2. RESEARCH EQUIPMENT

Dow University of Health Sciences has modern research equipment which is available for faculty and students to facilitate them in their research work. Recently, DUHS is establishing an Advanced Molecular Genetics and Genomics Diseases Research and Treatment Centre at Ojha Campus.

1. Establishment of An Advanced Molecular Genetics And Genomics Diseases Research And Treatment Centre At Ojha Campus, Dow University of Health Sciences, Karachi (On-going)

7.3. ONGOING-CONSTRUCTION PROJECTS

1. Establishment of Trauma Centre, BSL -3 Lab and Provision of support services at Institute of Chest Diseases Ojha Campus of Dow University of Health Sciences, Karachi.
2. Sindh Infectious Diseases Hospital & Research Centre at NIPA, Gulshan-e-Iqbal, Karachi.
3. Provision of Linear Accelerator with Integrated High Field MRI System in Sindh.
4. Establishment of Biosafety Lab (BSL-III) at Sindh Infectious Diseases Hospital & Research Centre at Karachi (On-going)



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CHAPTER 8

Strengthening Technological Infrastructure

8.1. DIGITAL LIBRARY

The Digital Library program was propelled by HEC to help researchers and mentors at public sector universities. Digital Libraries developed by Dow University of Health Sciences in their various campuses and institutes give access to global insightful writing in view of online delivery, peer-reviewed journals, databases, articles and e-books crosswise over an extensive variety of controls. Through HEC's digital library which is available from all computerized libraries built up in DUHS, clients can access more than 75,000 electronic substances. Following are the rundown of digital libraries at various campuses of Dow University of Health Sciences alongside the quantity of accessible systems.

- Digital Library (Ojha Campus) – 75 Computer Systems
- Digital Library (DMC Campus) – 80 Computer Systems
- Digital Library (Institute of Nursing) – 40 Computer Systems
- Digital Library (Institute of Business & Health Management) – 30 Computer Systems
- Digital Library (Dow College of Pharmacy) – 17 Computer Systems
- Digital Library (Dow College of Biotechnology) – 8 Computer Systems
- Digital Library (Dow International Dental College) – 35 Computer Systems

Total 285 upgraded and/or new Computer systems in all Digital libraries of DUHS.

8.2. PERN (PAKISTAN EDUCATION AND RESEARCH NETWORK)

PERN was initially launched in 2002 as a part of an IT action plan providing Internet facility and interconnectivity between universities for data bank integration, research collaboration and upgrading learning and teaching skills. Dow University of Health Sciences receives a total of 730 MBPS in Dow Medical College and Ojha Campus; DUHS is acquiring the services of the PERN-II Network. The bandwidth is further distributed to all other campuses. We have also recently activated PERN Backup link connectivity between both of our campuses & it will offer us fault tolerant PERN services, having a backup connectivity.

Pakistan Education & Research Network (PERN) is offering alliance services on the equity model to the education and research community of Pakistan. Including, high speed internet, in addition to PERN, there is the following addition:

- 1 Gbps link speed connectivity
- Academic Social Networking
- Eduroam (federated Wi-Fi network authentication)
- Local content hosting, for the partner universities/ institutes.

Through PERN we have acquired:

- 730 Mbps internet bandwidth
- 40 Mbps Internet bandwidth and
- 48 Live IP Addresses

The internet bandwidth is divided between

- Dow Medical College Campus (100 Mbps)

- Ojha Campus (630 Mbps)

The Smart University Wi-Fi project has been deployed in Ojha campus which is also sharing internet bandwidth of Ojha campus.

8.3. VIDEO CONFERENCING

Conferences are conducted in the designated Seminar Halls/Rooms, Faculty Meeting Rooms of each department, VC Board Room at Ojha and DMC Campus.

This facility is provided by the information technology department in all campuses. It is being used in different domains within campus needs and promoting flexible learning utilized by both faculty and students.

- The Clary Icon (PC based web conferencing) setup is installed in Ojha Campus for advanced conferencing. Huawei TE-50 is installed at the Video Conferencing hall at Head Office DMC Campus.
- Tandberg (Cisco) 990 MXP (Multiple unit supporting up to 4 sites) is deployed in the VC Board Room, DMC campus. Polycom PVX software is utilized in Ojha Campus for seamless video conferencing and web conferencing experience; which works on H-323 protocol.
- Web-based Conferencing such as International Days, Seminars and other Medical events are being utilized under the web streaming's of HEC Pexip Infinity Connect, Zoom Webinars, Facebook 'go live', Hangouts and Google Meet.
- APPNA Merit training, CTU (CRCP and CRC) classes, HEC workshops, interviews and official meetings are usually conducted through the Cisco WebEx facility of DUHS.

8.4. CAMPUS MANAGEMENT SOLUTION (CMS)

DUHS is aimed at providing students, faculty, and staff with immediate access to real-time information and connects that information to specific action. CMS is logically divided into several modules, each of which maps to a university function/department. DUHS worked closely with the HEC (Higher Education Commission) and the "Campus Management Solution" project was initiated. The Higher Education Commission selected six public sector universities for the implementation of Oracle PeopleSoft Campus Solutions.

The Campus Management software is an integrated solution which takes care of the various activities of an educational institution like institution management, student management, administrative functions, etc. The solution is available as a basic integrated application upgradeable to an Intranet / Internet system.

Oracle Corporation has a customized ERP Solution for academic institutions i.e. Campus Management or Student Information System. The solution is a combination of software and hardware. It helps manage the business processes of an academic institute in an efficient and professional manner. The integration between various processes and departments i.e. admissions (electronic and manual), enrolment, examination, fees etc. helps in automating the manual and traditional methods of functioning of a campus.

CMS Features

- CMS makes it easier to prepare and generate reports from different required aspects.
- The web-based features enable the faculty, students as well as the management to interact.
- Users Profile Setup as per Job Roles and Responsibilities.
- Easily integrated with other software applications.
- The application generates various reports useful to the management, to the faculty and to the end user separately.
- The security levels can be administered at three levels.

8.5. WEBSITE OF DUHS

The Website of Dow University of Health Sciences assists in the timely updating of news, events, and information on the official website of the university which is managed by the IT department. It provides all the information regarding admissions, curriculum, examination and events planned in the university. Following facilities are provided through a web portal.

- Faculty profiles
- Microsoft 365 access for all users, faculty/staff portal
- Tenders and Admissions
- Accessibility to DUHS official email.
- Curriculum and course outline of MBBS
- DUHS CME (Continuous Medical Education)
- Learning Management System (LMS)
- Alumni Association Webpage for Connecting with Dow
- Professional Development Center workshops schedule
- Office of Research Innovation and Commercialization (ORIC)
- JDUHS (Journal of Dow University of Health Sciences)
- Dow Diagnostics (Online Lab & Radiology Reports)
- Online Fee & Donation Payment gateway
- Individual academic programs and Colleges/ Institutes and Health Services Data/ Information

8.6. ONLINE ADMISSION SYSTEM

Online admissions assist in reducing workload, avoid data entry mistakes and of course in keeping up to date records by electronic means. DUHS announces admissions in different programs; online admission assists in form filling over the website, provision of electronic copy of prospectus along with related information, eligibility criteria & fee structure of the courses, day to day updates and news alerts about admissions, entry test & interview dates announcements, display of online Merit list.

8.7. CLOUD SERVICES FOR ACADEMICS: STUDENT ACCOUNT IDS

As part of the ICT Directorate's overall initiative to facilitate and enhance the learning experience at DUHS, the Microsoft Office365 cloud platform has been acquired and disseminated to the students: It will enable collaboration among faculty & students.

The services being offered through this platform are:

- Outlook for Email
- MS Office Online
- Microsoft Teams as collaborative workspace
- Microsoft Planner for teamwork planning
- Skype for Audio/Video Conference
- Yammer for social networking, etc.

To initiate the use of this platform, online accounts have been created for students. Roll out activities are being planned to hand-over these accounts to the students & give them a brief overview.

8.8. DOW CONNECT

Dow Connect connects all departments with our people, across DUHS and also serves as a student grievance portal. In order to streamline requests and better serve you:

1. We utilize a **Dow Connect System** to solve your issues as early as possible.
2. Every request is assigned a unique number which you can use to track the progress and responses online.
3. For your reference we provide complete archives and history of all your requests.
4. A valid email address is required to submit a request through the following features:

Ticket Filters

Define rules to route incoming tickets to the right department, concerning officers, as well as trigger actions.

By using the filter system, Dow Connect empowers you to automate the creation and routing of tickets. Set actions such as ticket rejection, department/concerning officer assignment or even send an automated canned response. Rule criteria of the filter can include any custom field added to the forms as well as user data.

Assign, Transfer & Referral

Transfer tickets between departments to make sure it's being handled by the correct concerning officer or assign tickets to a particular department or team of agents.

Refer to a ticket to maintain view-only access to tickets when transferred or assigned to a department/officer. Tickets can be auto-assigned by help topics or departments when they arrive, but what if they need to be reassigned? No problem! You can reassign tickets to

agents or a team of agents or transfer to a different department all together. Transfer, Assignment, and Referral notes are logged in the ticket thread to keep track of what happened in the ticket.

Auto-Responder

Configurable automatic reply sent out when a new ticket is opened, or a message is received. Auto responses can be formatted to pull information from the ticket to personalize the email. Dow Connect supports placeholder variables which will pull the user's first name in the auto response. Auto responses can be edited and customized for each department as well as associated with Help Topics.

Thread Action

Officers now have the ability to create a Ticket or Task from a Ticket's thread entry or from a Task's thread entry. Need to create a separate ticket or task from a user's message to separate or expand on that item? No problem! Now with thread action, agents can simply create a new ticket or task with the message and keep it in the original ticket thread. Thread actions are noted in the original ticket thread with reference to both the new item as well as the thread item it was pulled from.

Tasks: Create an Internal to-do list for Agents

Tasks can be associated with tickets or they can stand alone in the help desk. When tasks are ticket-related, this prevents the tickets from being closed until all tasks within the ticket are complete. Add collaborators to include external users to the task items while keeping them separate from the ticket thread and contents.

**[Please Follow DOW Connect Portal Link To Register Your Complaint-
HTTP://DC.DUHS.EDU.PK/INDEX.PHP](http://dc.duhs.edu.pk/index.php)**

8.9. MICROSOFT DYNAMICS

Microsoft Dynamics 365 Finance & Operations Dynamics 365 Finance & Operations is a cloud-based Enterprise Resource Planning (ERP) system well-suited for large or diversified companies. It offers you the ability to keep track of all your finances and inventory.

Dynamics 365 Cloud based solution licensing is provided to DUHS by HEC. Following are the most popular modules (the complete list is much more extensive):

- Accounts payable
- Accounts receivable
- Budgeting
- Financial management
- Cash and bank management
- Cost accounting
- Project management and accounting
- Asset management
- Inventory management
- Warehouse management
- Human resources management
- Cost management
- Master planning
- Procurement and sourcing



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CHAPTER 9

Universities Building Communities

9.1. UNIVERSITY-COMMUNITY INTERACTION

University and Community Interactions in 2021-2022	
1. Blood Donation Day Drive	Community Service, Community Building Activities of Dow International Medical College (DIMC)
2. Visit at old home in Karachi – Dar-ul-Sukoon	
3. Heat Stroke Awareness Campaign	
4. Children with Disability Day –Dar –UI -Sukoon	
5. Breast Cancer Awareness Campaign	
6. Academic and Career Counseling Session	Community Service, Community Building Activity of Dow Institute of Business and Health Management (IBHM)
7. Capacity Enhancement Program	
8. IBHM had initiated a 4 weeks' mandatory community service for its graduates for making them responsive to community needs and to make them responsible citizens	
9. Health Promotion Initiative	Community Service and Community Building Activities of Dow School of Public Health (SPH)
10. Community-based research project: Metabolic Syndrome and Risk for Cardiovascular Disease in Apparently healthy Pakistani Adults	
11. Awareness Campaign on Pre Diabetes “Rakho Khayal Apna Diabetes se Pehle”	
12. World Obesity Day	
13. Dental Health Education Given to Parents of Cerebral Palsy Children	
14. Virtual Oral Health Session at Zubaida Academy Junior Public School	Community Service and Community Building Activities of Dow Dental College (DDC)
15. Visit to Malala School	
16. Visit to Govt Boys Secondary School Kotwal Building	
17. Visit to Mama Baby Care Cambridge School Middle & Senior Girls Campus	Community Service and Community Building Activities of Dow International Dental College (DIDC)
18. Free Oral Health Screening Camp was arranged at Muhammadi Girls Academy	
19. Dental Screening and Oral Hygiene Camp at Prince Ali Boys School	
20. Free Medical and Dental Camp at Rangers 53 Dental Camp	
21. Long Khoso Village Matyari	
22. Rangers 63 Dental Camp-Lyari	
23. Rangers 53 Dental Camp-Qayyumabad	
24. Pakistan Youth forum welfare Trust -Dental camp at Aghaaz School	
25. Rangers 53 Dental Camp-Qayyumabad	

26. Rangers 63 Dental Camp-Lyari	
27. Field visit to Public Health School	Community Service, Community Building Activities of Dow Institute of Nursing & Midwifery (DION&M)
28. Educating about the myths of Covid -19 vaccination	
29. Visit to Omair Sana Foundation	Community Service, Community Building Activity of Dr. Ishrat ul Ebad Khan Institute of Oral Health Sciences
30. World Oral Health Day	
31. Oral Health Awareness program at Visit to Aisha Islamic Orphanage	Community Service, Community Building Activities of School of Dental Care Professionals (SDCP)
32. Oral Hygiene awareness, Visit to Saadi Government boys Secondary School Shah Faisal, Karachi.	
33. Oral Health promotion trip to Street Style School at St. Joseph Convent	Dow Institute of Medical Technology (DIMIT)
34. Patient's family education at CHK	
35. Training CPR to the students of Dawood University of Engineering and Technology	
36. Awareness of Basic Road Safety and Rules at Dawood University of Engineering and Technology	
37. Awareness Session on Burns Safety and Management at Jinnah Sindh Medical University	
38. Awareness session on healthy diet and weight control. at Govt. Degree College for Boys	

9.2. UNIVERSITY'S ROLE IN BUILDING THE COMMUNITY

The Dow University of Health Sciences, since its inception, has been focusing on community services to provide preventive, diagnostic and treatment facilities for community health care especially to the underprivileged class. The students of various undergraduate and postgraduate programs of DUHS are also actively involved with the faculty members in all the Civic Engagements of DUHS.

9.2.1. DOW SKILLS DEVELOPMENT CENTER

The Dow Skills Development Centre (DSDC) was founded in 2008 as a social responsibility of Dow University of Health Sciences in an effort to improve the economic conditions of low-income households surrounding the Ojha Campus area, by offering short-term Technical and Vocational Education and Training (TVET) geared towards income generation. The programmes include various ICT courses (including a nationwide recognized Diploma), specialized tracks for women and young girls in a safe and secure environment, and a host of soft skills training via the Institute of Business and Health Management. All the courses are endorsed or certified by the Sindh Board of Technical Education, Karachi as well as Dow University of Health Sciences.

In 2022, responding to the rapidly increasing need for quality Health Care personnel in Pakistan, particularly in the aftermath of the pandemic, DSDC initiated the DUHS Skills Enhancement Programme for DUHS Staff across all spectrums.

This is an Annual Hands-on Up-skilling & Training Pathway covering over 3000 DUHS employees targeted to improve the level of services offered by DUHS Hospitals and Tertiary care Units and for HCPs to excel in their chosen professions.

Why is Skills Upskilling and Skills Development Necessary?

Skills acquisition is vital for an economy to compete and grow, particularly in an era of rapid technological change. Vocational Education and Training (VET) is a direct means of providing people, particularly those with limited academic backgrounds, with skills relevant to the evolving needs of employers and the economy. Living in an era driven by information technology makes investing in our youth through ICT education (including Emerging Technologies) and other hands-on skills relevant to Pakistan's industrial environment a necessity.

Vision:

Pakistan's premier providers of Hands-on Upskilling & Training in healthcare as well as trades relevant to Pakistan's industrial environment in line with Pakistan's commitment to the UN Sustainable Development Goals, specifically SDG 3 (Good Health and Well-being) and 4 (Quality Education)

Mission:

To enable youth and marginalized segments of Pakistan's populations to become skillful and financially independent by empowering them with the training as well as emotional health and well-being to think, create, change, and improve upon society.

The following Courses have been conducted by Dow Skills Development Centre from July 2021 to June 2022:

1. Diploma in information Technology (DIT) enrolled 50 students
2. Certificate in Information Technology (CIT) enrolled 213 students
3. Microsoft Office enrolled 27 students

From February 2022 Dow Skills Development Centre Conducting the Digital Literacy and Upskilling Training for the employees of Dow University of Health Sciences.

DOW UNIVERSITY OF HEALTH SCIENCES
DOW SKILLS DEVELOPMENT CENTRE

Dow Textiles Learning Factory for Disadvantaged Women and Young Girls

ABOUT THE PROJECT:
A learning factory represents a simulation of a real factory environment where students can gain hands on training in a skill by conducting various industry led projects, while also earning an income.

INVITATION FOR COLLABORATION

Why Should You Support This Venture?

The DSDC Stitching Unit was a running programme until the pandemic had to divert funding leaving hundreds of candidates stranded without any access to quality training.

Training in the tailoring trade has led to many women to become self sufficient, while also being able to support their families.

Total Funds Requested (donation/grant) : PKR 2,187,000

WEB:
<https://www.duhs.edu.pk/new/dow-vocational-training-centre-introduction>
www.facebook.com/DOWVocationalAndTechnicalTrainingCentre

ADDRESS:
1st Floor, DIMC Central Library Building,
DUHS Qjha Campus, Suparco Road Off
University Road, Karachi, Pakistan.

CONTACT:
farhankhan@duhs.edu.pk | 0324-2940291 | 021-38777111 Ext. 4331

i. DOW INTERNATIONAL MEDICAL COLLEGE (DIMC)

CARE-NGO & DIMC: Blood Donation Day Drive (14th June, 2022)

Students of DIMC and Dr. Sana along with members of Care NGO organized a drive on 14th June, 2022 to generate awareness on Blood Donation and its significance in saving lives during emergencies particularly during Obstetric emergencies and accidents. The purpose of this activity was to provide practical support and to help and encourage patients to take more responsibility for their own health.

Visit at old home in Karachi – Dar-ul-Sukoon (4th June, 2022)

A planned visit was conducted on 4th June, 2022 at an old home located at Numaish Chowrangi, Karachi to organize playful and healthy activities for the old home residents. They were also provided with food and funds with the courtesy of medical students working with “Care” NGO. 120 Senior citizens were targeted through this activity.



DPCA, DIMC: Heat Stroke Awareness Campaign (26th May, 2022)

An activity was organized on 26th May, 2022 to raise awareness regarding heat stroke and to guide the community about the ways to avoid heat stroke in the hot weather of Karachi.



CARE & DIMC: Children with Disability Day at Dar –UI –Sukoon (5th March, 2022)

The day was celebrated with disabled children at Dar-UI-Sukoon on 5th March, 2022 along with members from Care NGO. Goodies and gifts were distributed by the Care NGO.

DIMC: Breast Cancer Awareness Campaign (6th October, 2022)

An awareness Seminar was conducted on 6th October, 2021 including free screening through physical examination was conducted among the community women visiting DUHS for various health related services.



ii. INSTITUTE OF BUSINESS & HEALTH MANAGEMENT (IBHM)

IBMH: Academic & Career Counseling Session (22nd March, 2022)

On 22nd March 2022, marked off the session on Academics and Career Counseling Session to achieve the SDG Goal 4 which is "Quality Education " organized by CSSS, IBHM-DUHS in collaboration with DCOP-DUHS, for the students of Govt. College for Women Korangi-06 and NJV Govt. Higher Secondary School.

The session started with the basic introduction about academics and career path, as Dr. Sumbul principal DCOP, & Dr. Izhar Hussain Director IBHM elaborated the importance of career guidance, enlightened students with useful tips and pieces of advice for figuring out the best-suited career paths for themselves by clearing their doubts throughout the session. Consequently, the session was concluded by Ms. Yasmeen Lecturer & Patron. The whole session empowered aspiring students to recognize their objectives for short term and long term success by making the right career choices.

At the end of session students were given a detailed tour of DOW OJHA Campus. Starting from the Pharmacy Department, the visit introduced them to multiple departments, number of libraries and the facilities that the university offers to its students. The visit also included demonstrations of the DIMC library, Gymnasium, and Animal House. During the event students also gained exposure to the services rendered by DUHS.





IBHM- Corporate Social Responsibility Society, Ration Drive 2022 – Rishta Ahsas Ka (22nd April, 2022)

The prime objective of 'Ration drive 2022' is to achieve SDG 2 "Zero Hunger" and reach out & provide grocery items to the IBHM Staff and Janitorial & guards at ION building which includes IBHM, SPH, ION & IMT department. Team CSSS worked hard to raise funds and grocery items for distribution to the DUHS community so that the Holy month of Ramadan is filled with less fretting and more tranquility. Bihar Welfare Foundation and students of IBHM donated Ration bags.



iii. DOW INTERNATIONAL DENTAL COLLEGE (DIDC)

DIDC: Visit to Mama Baby Care Cambridge School Middle & Senior Girls Campus (23rd June, 2022)

The Community Outreach program was organized by the Department of Community and Preventive Dentistry DIDC, DUHS held on June 23rd, 2022 at Mama Baby Care School Girls Campus near Islamia College, Gurumandir New Town Karachi. All Faculty members of the Community and Preventive Dentistry Department and Students of 3rd year BDS activity participated in this community outreach program. Services provided in the program included: Oral screening and proper brushing methods taught by the students, and instructions about good food and bad food were given with the help of chat and play cards. Brushing kits/ samples were also given to every student and the importance of brushing was demonstrated at the end of the session. The event was collaborated with Colgate Palmolive ® Pakistan. School health service was done for the students to promote, protect their health, and maintain their oral health to over health.



DIDC: Free Oral Health Screening Camp at Muhammadi Girls Academy (31st May, 2022)

A free oral health screening camp was organized and conducted by the Principal and Faculty members of Community & Preventive Dentistry Department along with the house officer of DIDC, DUHS on 31 May 2022 at the Girls' Hostel of Muhammadi Girls Academy for the Ismaili Youth Services, Malir Karachi. The hostel residents were studying in primary, middle and secondary sections, and girls were supervised by the hostel warden. Department of Community & Preventive Dentistry DIDC provided free oral health care services, including oral screening along with measurement of height and weight. Lectures on oral hygiene, habits, and video/demonstration of proper brushing methods were taught to every student. Brushing kits were also given to each student. Oral Health Consultation, recommendations and referrals were done during the entire event.



DIDC: Dental Screening and Oral Hygiene Camp at Prince Ali Boys School (20th April, 2022)

A free dental screening and oral hygiene awareness camp was held at Prince Aly Boys School on 20 April 2022. This camp was led by the Principal of Dow International Dental College Prof. Dr Aynah Tariq Sheikh, Dr Mustafa Naseem (Assistant professor), Dr Wajiha Anzar (Lecturer) in Department of Community and Preventive Dentistry and three House Surgeons posted in various department of DIDC. The Camp commenced at 10 am by an awareness session for School children which highlighted the importance of Oral health on systemic health, information on good and bad foods for oral health as well as oral preventive measures, students were also demonstrated proper brushing technique and were given a chance to perform a hands-on exercise on models. A total of 106 students were examined for Anthropometric measurements like height, weight and dental checkups were done additionally, students were provided with the free Colgate samples.



DIDC: Rangers 53 Dental Camp (15th March, 2022)

Free medical/dental camp organized in collaboration with 53 Wing ASGRA (Pakistan Rangers Sindh) on 15th March 2022. Faculty of Department of Community and Preventive Dentistry and House officers of Dow International Dental College, DUHS actively participated in this noble cast. Free Medical and Dental camp took place at Govt Boys and Girls Secondary School Qumar UI Islam Campus Punjab Colony Karachi, where the team members work for underprivileged families and are constantly in need of people for basic medical services, the institute voluntarily works for the general public. The team's focus is on basic Oral screening; oral health promotion aims to prevent Oral health disease before it occurs or to reduce the impact of oral health disease. This was done through a variety of strategies or community-based programs that aim to improve and maintain population oral health. A certificate of recognition was awarded to all participants by Lieutenant Colonel Wing Commander 53 Wing Pakistan Rangers (Sindh).



DIDC: Medical and Dental Camp at Long Khoso Village Matiari (13th March, 2022)

Department of Community Dentistry DIDC, DUHS Karachi, in collaboration with KONPAL CHILD ABUSE (Prevention Society), organized a free medical & dental camp at Long Khoso Village, Tando Saeed Khan Stop Main Hyderabad to Matiari Highway District Hyderabad. The 15 team members of the DUHS including the Chairperson of the department, one assistant professor, two lecturers, three postgraduates, four house officers, and three dental care professionals arrived at the village at 10.00 AM. At the time of arrival to the village, various health issues were discussed with the KONPAL team. After that free screening and consultation, physical measurement was done for all of the villagers. It was the first time the villagers were exposed to the dental screening program so the team was enthusiastic to participate in the voluntary work. Along with free checkups, and brushing activity for children was also performed by the faculty members, and brushing kit samples were also given to every villager.



DIDC: Rangers 63 Dental Camp-Lyari (6th November, 2022)

Pakistan Rangers (Sindh) wing 63 established free Medical and dental camp held on 6th November at BARRISTER ZULFIQAR LAW COLLEGE to provide quality of health and health promotion services for the benefit of general public of Lyari. Faculty of Community & Preventive Dentistry along with House Officer of DIDC were participated in this camp the objective of this camp was provided health services to people of Lyari i.e., included free consultation, oral screening and health promotion.



DIDC: Rangers 53 Dental Camp (28th October, 2021)

Pakistan Rangers (Sindh) wing 53, organized a free Medical and dental camp held on 28th October 2021 at Rahat Islamia Government Girls Secondary School, Block-A, Qayyumabad to provide quality health services for the benefit of General public. Free medical and dental camp was arranged to facilitate the remote area and the dwellers.

Faculty of the Community & Preventive Dentistry Department and students of 3rd year BDS provided services in this event, including free consultation, oral screening and health promotion activities. About 150 visitors were examined.



DIDC: Pakistan Youth forum welfare Trust - Dental camp at Aghaaz School (7th October, 2021)

The Department of Community and Preventive Dentistry-Dow International Dental College, arranged a Free Dental Camp in collaboration with Pakistan Youth Forum Welfare Trust (PYFWT) at a charitable school "Aghaaz School" located at Haji Lemo-Goth, Karachi on 7th October, 2021. Faculty members along with 3rd year BDS students participated in this free dental camp. The main focus of this camp was to screen children from low socio-economic backgrounds and to increase oral health awareness among them. Students were screened for oral diseases, followed by measurement of height and weight, later on they were guided about diet and nutrition, proper tooth brushing technique, parafunctional habits and their side effects.



DIDC: Rangers 53 Dental Camp- Qayyumabad (10th July, 2021)

Free Medical and Dental Camp in collaboration with Pakistan Rangers Wing 53 ASGR was conducted at Raahat Islamia Government Girls Secondary School, Block-A Qayyumabad on 10th July, 2021. The residents of the nearby area were invited to become a part of this dental camp with free consultation. The faculty members Dr. Qaiser Ali Baig, Dr. Mustafa NAseem provided services in this event and were accompanied by the house officers who enthusiastically took part in oral screening and prevention programs.



DIDC: Pakistan Rangers 63 Dental Camp-Lyari (4th July, 2021)

Free Medical and Dental Camp was organized by Pakistan Rangers wing 63 (Al-Fatah) in which the Community Dentistry department participated on 4th July, 2021 at Barrister Shaheed Zulfiqar Ali Bhutto Law College, Lyari. The Department, Faculty and House Surgeons participated in this dental screening and oral health promotion program. In this event, more than 200 visitors were examined for Oral diseases and also facilitated them in learning about good ways on maintaining oral health.



iv. SCHOOL OF PUBLIC HEALTH (SPH)

SPH: Free Medical Camp for Faculty Staff and their Families (17 & 18 March 2022)

Free medical camp was also organized by the School of Public Health at Ojha campus for faculty, staff and their families. The camp provided free health checkup, free blood tests and nutritional assessment to attendees. On top of that, the camp helped people learn about weight management and diabetes prevention measures.

Pakistani Adults Metabolic syndrome is a constellation of metabolic aberrations that collectively increase the risk for cardiovascular disease and type 2 diabetes. In the past few years, several expert groups have attempted to set forth simple diagnostic criteria for use in clinical practice to identify patients who manifest the multiple components of the metabolic syndrome. Greater understanding of Metabolic syndrome developments may provide insight into targeted prevention strategies for individuals at greatest risk. With a research grant of 1 million, medical camps at various locations in



SPH: Awareness Campaign on Pre Diabetes “Rakho Khayal Apna Diabetes se Pehle”

[illegible]

awareness of prediabetes, a serious health condition, help those with prediabetes know where they stand and prevent type 2 diabetes. The School of Public Health (SPH) and the Primary Care Diabetes Association Pakistan (PCDA) have partnered with the Martin Dow Pharmaceuticals (Pak) Ltd to launch the first awareness campaign “Rakho Khayal Apna Diabetes se Pehle” about prediabetes.

SPH: Training sessions for Primary care health professionals have been arranged in Karachi and Hyderabad until now.

SPH: World Obesity Day (March 16, 2022)

On the occasion of World Obesity Day, School of Public Health, Dow University of Health Sciences (DUHS) in collaboration with Primary Care Diabetes Association (PCDA) organized an awareness seminar which was preceded by a walk led by Prof. Nusrat Shah to raise awareness about obesity. Pro Vice Chancellor Prof. Nusrat Shah, Director School of Public Health and Director Research Prof. Kashif Shafiq, Prof. Sumbul Shamim, Dr. Zareen Kiran, Dr. Farid-ud-Din, Nida Javed of National Institute of Diabetes and Endocrinology, all attended the event. Walk participants held placards and banners with awareness messages on the causes of obesity and its prevention. Apart from this a free medical camp was also organized for the public, families of the faculty and staff of the university.



SPH: Dental Health Education Given to Parents of Cerebral Palsy Children

Patients with cerebral palsy are at a greater risk of dental issues. With diligence and regular dental checkups, however, children can maintain healthy teeth and gums. As a parent, guardian, or caregiver, are responsible for supervising daily oral hygiene at home. Brushing, flossing, and rinsing should be a daily habit. This includes brushing, flossing, and rinsing after meals and after the medication intake.



The conference offered information, resources and networking opportunities to audiences with an immersive online and on campus opportunities. This interdisciplinary forum for scholars, teachers, and practitioners from many different professional disciplines provided a holistic perspective, where environmental, cultural, economic and social concerns intersect. A series



DOW UNIVERSITY OF HEALTH SCIENCES

OFFICE OF RESEARCH, INNOVATION & COMMERCIALIZATION

INTERNATIONAL SPEAKERS


Prof. Ian Philip
Professor of Age Care Technologies, UK


Prof. Danielle Gagliardi
Faculty of Health, Behavior & Society, University of North Carolina at Chapel Hill, USA


Prof. Akhtar Hussain
President, DSI International Education, Norway


Prof. Shweta Limra
IBM QI Challenge leader for the Food Systems Portfolio, School of Earth & Health Sciences


Dr. Beth Mawardi-Konstantin
Associate Professor, Bond University Queensland, Australia



NATIONAL SPEAKERS


Prof. Dr. Ali Hameed
Associate Professor, Aga Khan University


Prof. Raza Ali Rehman
Associate Professor & Consultant Physician, DCHS


Prof. Saba Raza Butt
Associate Professor, Pakistan National Academy of Sciences


Dr. Nayela Zaid
Associate Professor, UNIST Pakistan


Dr. Nadeem Akbar
Senior Scientist, National Institute of Health


Dr. Muzammil Khan
Senior Scientist, National Institute of Health

INTERNATIONAL CONFERENCE

SUSTAINABLE DEVELOPMENT GOALS

"Moving Towards Population Health & Wellbeing"

December 23 – 23, 2021

DUHS Ojha Campus Karachi - Pakistan

ABSTRACT SUBMISSION DEADLINE EXTENDED till 27th November 2021

CONFERENCE SECRETARIAT

Office of Research, Innovation & Commercialization
2nd Floor, Sero-Biology Building, Dow University (Ojha Campus), Suparco Road, Scheme 33, Karachi – Pakistan
Contact No: 0345-23298
Email: icsgds2021@duhs.edu.pk | Web: www.duhs.edu.pk

ABSTRACT SUBMISSION

icsgds2021@duhs.edu.pk

CONFERENCE LINK

<https://www.duhs.edu.pk/new/oric-2/>



v. DOW DENTAL COLLEGE (DDC)

DDC-DOW DENTAL COLLEGE HOLDS VIRTUAL ORAL HEALTH SESSION IN PUNJAB'S BHAKKAR DISTRICT (18TH MARCH, 2021)

The Community Dentistry Department of Dow Dental College (DDC) conducted an online oral health education session for Zubaida Academy Junior Public School in Bhakkar District, Punjab on World Oral Health Day, **18th March 2022**.

This virtual session was arranged using a Zoom link with the collaborated efforts of Dr Muhammad Taqi, Head of Community Dentistry Department-DDC and Dr Amber Saeed. The session was focused on oral health education and diet. In addition to the presentation, videos regarding brushing techniques were also demonstrated.

Lastly, an interactive session was held in which students' questions about their dental health problems in everyday life were answered.



DDC- Visit to Malala School to promote oral hygiene practices (21st October, 2021)

In order to spread oral hygiene awareness, the Department of Community Dentistry, Dow Dental College (DDC) including Dr Muhammad Taqi, Dr Adnan Sukkarwallah, Dr Mona Shah, Dr Babar Zia and Dr Amber Saeed and third-year students of DDC, arranged a field trip to Malala School; a primary girls school in Karachi on **October 21, 2021**.

This visit aimed to screen and spread oral hygiene awareness among children aged 9-14 years. One hundred nineteen school children (from class III- class VIII) received intra-oral examination, and their following dental disease profile including; dental caries, staining, and calculus were documented. The children were educated on developing healthy oral hygiene practices and were also educated on the importance and correct hand hygiene techniques, especially in the COVID pandemic. The dental students also discussed the impact of a healthy diet and its correlation to oral and subsequent systemic disease.



Lastly, the department distributed a dental kit containing a toothbrush, toothpaste and a brushing chart to each child to encourage the development of healthy oral practices.

DDC-Dow Dental College promoted Oral Health at Government Boys Secondary School Kotwal Building (21st September, 2021)

The Department of Community Dentistry at Dow Dental College (DDC) arranged an oral health promotion visit to Government Boys Secondary School Kotwal building (GBSS) on **September 21, 2021**, in which forty-eight third-year dental students visited GBSS under the supervision of Dr Muhammad Taqi, Assistant Professor-DDC, Dr Adnan Sukkarwallah, Assistant Professor-DDC, Dr Babar Zia, Dr Mona Shah and Dr Amber Saeed.

This visit aimed to screen and spread oral hygiene awareness among school children aged 11-14 years. Children received intra-oral examination, and their subsequent dental disease profile was documented, including dental caries, staining, and calculus. They were mainly educated on developing healthy oral hygiene practices such as regular dental checkups, tooth brushing and flossing, and correct techniques. Additionally, a dental kit was given to each child to encourage the implementation of the aforementioned oral hygiene skills.



vi. DOW INSTITUTE OF NURSING & MIDWIFERY (DION&M)

DION&M: Field visit to Public Health School (1st, 8th, 15th and 22nd March, 2022)

Four visits were arranged for GBSN-Semester V students for which first visit was held on 1st March 2022, second visit was held on 8th March 2022, third visit was held on 15th March 2022 and last visit was held on 22nd March 2022. Students were very much motivated and enthusiastic for this visit of Community Health Nursing-II. As they reached for a visit, they were given a brief lecture, along with a visit to the school. Ms. Tasleem briefed students about their school. Students visited different areas of the school including classrooms, labor room, maternity room, girls' hostel, laboratory, pharmacy, Head office, science lab, Library, Skills lab, OPD rooms, vaccination room and breastfeeding room. Along with these facilities they also provided education to the girls free of cost. These students are facilitated with two courses of LHV/ Midwifery.



DIKIOHS: Educating about the myths of Covid -19 vaccination (21st October, 2021)

On 21st October 2021, first time in Dow Institute of Nursing and Midwifery, the far sighted community at Baba Island was touched by the final year Generic BS Nursing students of DIONAM under the. The students of DIONAM have given teaching about preventions for covid -19 and educating about the myths of Covid -19 vaccination.



vii.DR. ISHRAT UL EBAD KHAN INSTITUTE OF ORAL HEALTH SCIENCES (DIKIOHS)

DIKIOHS: Visit to Omair Sana Foundation (October, 2021)

A group of students along with their mentors, Dr. Tuba Ghazal and Dr. Sana Masood conducted under the supervision of Dr. Sohail Saadat an oral health awareness session at Omair and Sana Foundation – Thalassemia Centre, Bhangoria Goth Karachi, in October 2021. Initially, oral presentation was given to the patients and their attendants focusing primarily on oral manifestations of thalassemia. Guidance was provided related to dental caries, recommended diet and healthy eating habits. Then proper tooth-brushing technique (modified Bass method) and flossing technique (Spool method) were demonstrated individually to every patient with the help of models, toothbrush and dental floss.



DIKIOHS: World Oral Health Day (21st March, 2022)

Every year World Oral Health Day is commemorated around the globe on 20th of March. Therefore, world oral health day was celebrated by the faculty of Dr. Ishrat ul Ebad Khan Institute of Oral Health Sciences on 21st March 2022 and the theme for world oral health day was "Be proud of your mouth". In this regard an awareness walk was arranged by the DIKIOHS administration in collaboration with the department of Community Dentistry in which faculty members, house officers and students participated. After the awareness walk, the Department of Community Dentistry on the directions of Principal and In-charge department

Community Dentistry arranged an awareness program regarding the prevention of three major oral diseases i.e. dental caries, periodontal diseases and oral cancer



among the patients visiting dental OPD. Moreover the patients were taught how to brush properly.



DIKIOHS: Visit to Aisha Islamic Orphanage (2nd November, 2021)

The department also provided oral health promotion and education in under-privileged communities. A trip was planned to the Aisha Islamic Orphanage in Clifton, Karachi on 2nd November, 2021. The children residing there were educated by the faculty members and students regarding oral health and hygiene.

viii. SCHOOL OF DENTAL CARE PROFESSIONALS (SDCP)

SDCP: Oral Hygiene awareness, Visit to Saadi Government boys Secondary School Shah Faisal (16th November, 2021)

Students and Faculty of SDCP conduct a visit at Saadi Government boys Secondary School Shah Faisal, Karachi on 16th November, 2021. The students of the school were guided about dental care, eating habits and health diet. Proper brushing techniques and flossing techniques were also demonstrated to the students.



SDCP: Oral Health promotion trip to Street Style School at ST. Joseph Convent on (13th October 2021)

The school conducted an oral health promotion trip to St. Joseph Convent on 13th October, 2021. The activity started with the presentation given to students regarding oral hygiene, healthy eating habits and diet. The oral health promotion aims to prevent Oral health disease before it occurs or to reduce the impact of oral health disease. Students were taught brushing techniques.

DIMT: Patient's family education at CHK (29th June, 2022)



A faculty Development Training session “A road trip to life” a session on the prevention of road traffic accidents was conducted by students of Respiratory and Critical Care Technology, DUHS under the supervision of Mr. Shagufta Ishtiaq, faculty of respiratory and critical care technology, on 8th June 2022 at Dawood University of Engineering and Technology in collaboration with Liaquat National Hospital. Inspector Kashif Nadeem, in charge of the airport traffic section, and Dr. Kahkashan, HOD, RSDC Liaquat national hospital was invited as chief guest. Ms. Asma Yamin, Mr. Immad Ali Rajput, and Mr. Rahul were invited as CPR facilitators and instructors from Liaquat National Hospital. The purpose of this course was to improve road safety measures, group activities, CRP Training, and pledge. This course was conducted for 1 day, from 2:30 pm to 3:30 pm.

Join us for

A ROAD TRIP TO LIFE

A session on Prevention of Road Traffic Accidents

08 JUNE

Supervisor of the project
Mrs Shagufta Ishtiaq
Respiratory & Critical Care
Technologist DMT

Goals of session

- Story telling
- Road Safety Measures
- Group activities
- CPR training
- Pledge

Speakers

- Asra Abdul Malik
- Warisa Mohsin
- Rooha binte Azhar



VENUE & TIME

At Dawood University of Engineering and Technology
Timings: 2:30 pm-3:30 pm

E-CERTIFICATES WILL BE PROVIDED

A community service project by final year Respiratory Therapists of Dow Institute of Medical Technology






CURATIVE

All the students were awarded E-certificates and survivors were awarded as a token of appreciation to the chief guests.



In Collaboration with **IISE** **CURATIVE**

A ROAD TRIP TO LIFE
A Session on Prevention of Road Traffic Accidents

GOALS OF THE SESSION
Story telling
Road Safety Measures
Group activities
CPR Training
Pledge

SPEAKERS
Asra Abdul Malik
Warisa Mohsin
Rooha Binte Azhar

08 June, 2022
DUET Seminar Hall

Supervisor of the project
Mrs. Shagufta Ishtiaq
Respiratory & Critical Care Technologist DMT

E-Certificates will be provided

A Community service project by final year Respiratory Therapist of Dow Institute of Medical Technology

DIMT: Awareness Session on Burns Safety and Management at Jinnah Sindh Medical University (4th June, 2022)

In order to provide Community Services by the Dow University of Health Sciences, students of Dow Institute of Medical Technology from the discipline Respiratory and Critical Care Technology conducted Awareness session on burns “BURNS SAFETY”. The session was carried out at Jinnah Sindh Medical University on 4th June 2022 at 11:00 am to 12:00 pm. The Guest of this session was the Director of Institute of Medical Technology-JSMU, Dr. Imran. The session was supervised by Ms. Shagufta Ishtiaq-Senior Lecturer at DIMT. Speaker of this session were Ms. Sidra Shafique, and Ms. Sumaiya Naz Ilsa Khan who are the students of 4th Year RCCT. Session main content were “Discuss the Assessment and Classification of Burn”, “Fluid Management”, “Burn Care”, “Treatment Plan”, and “Complications”. The session was started with the name of Allah, and introduction to the facilitator, speaker, supervisor and chief guest. This interactive session was completed in very smooth and interactive.

BURNS AWARENESS SESSION

Under the Supervision of
Miss Shagufta Ishtiaq.

By final year RT's of
Dow University of Health Sciences.

OBJECTIVES: Discuss the Assessment and Classification of Burns, Fluid Management, Burns Care, Treatment Plans and Complications.

Burn wounds are not only caused by fire

BURN WOUNDS ARE CLASSIFIED INTO THREE LEVELS OF SEVERITY

WHAT TO DO WHEN YOU OR SOMEONE ELSE GETS BURNED?

- 1 Run cold water over the wound as soon as you can
- 2 DO NOT use ice on the wound
- 3 DO NOT use any of these: *ointments, fat, grease, Petroleum Jelly*
- 4 DO NOT pop blisters if there are any
- 5 Phone 084 124

Date: 4th June 2022
Time: 11am to 12pm
Venue: JSMU

E-Certificates will be provided

Speakers:
Sidra Shafique
Sumaiya Naz
Ilsa Khan

DIMT: Awareness session on Healthy Diet and Weight Control. at Govt. Degree College for Boys (26th May, 2022)

In order to provide Community Services by the Dow University of Health Sciences, students of Dow Institute of Medical Technology from the discipline Respiratory and Critical Care Technology conducted Awareness session on obesity "HEALTHY DIET AND WEIGHT CONTROL". The session was carried out at Govt. Degree Boys Sciences and Commerce College, Gulistan e Jauhar on 26th May 2022 at 11:00 am to 12:00 pm. The Guest Facilitator of this session was the Principle of this Govt. School. The session was supervised by Ms. Shagufta Ishtiaq-Senior Lecturer at DIMT. Speaker of this session was Ms. Anisha Zehra, and Ms. Aliza Anwer who are the students of 4th Year RCCT. Session main content were

"Impact of Obesity", "Contributors of Obesity", "How to overcome Obesity", and "Role of Physical Activity and Exercise towards Healthy Life". The session was started with the name of Allah, and introduction to the facilitator, speaker, supervisor and chief guest. This interactive session was completed in very smooth and interactive. The closure of the session was on handing over flower bouquet and e-certification provided.



The poster is titled "Awareness On Obesity" and features a photograph of a person's midsection being measured with a yellow tape measure. The text on the poster includes the speakers' names, the date, the session title, the location and time, and a list of topics to be covered.

Awareness On Obesity

speakers: Anisha Zehra
And Aliza Anwer

May 26

Join Our Session

At Govt. Degree boys science and commerce college
Gulistan e Jauhar.
Timings: 11:00 to 12:00
E-certificates will be provided

What You Will Learn:

- Impacts of Obesity
- Contributors of Obesity
- How to overcome Obesity
- Role of physical Activity and exercise towards healthy life.

9.3. ALUMNI AFFAIRS: OUTSTANDING ACHIEVEMENTS

Alumni from Dow University of Health Sciences are serving in various medical and allied health sciences of national as well international repute.

International Alumni of DUHS

Over 3000 graduates of Dow University of Health Sciences are practicing in various medical institutions of USA, UK, KSA and other countries. Majority of them are supervising the different medical departments, contributing in the medical researches and in their respective fields as alumni of DUHS:

National Alumni: Outstanding Achievements

A large number of graduates of Dow University of Health Sciences are serving humanity throughout the country and hold key posts. Majority of them are the heads of various health care institutions. Graduates of Dow College of Pharmacy are rendering their services in highly reputable private and public sector organizations. Some notable entities where alumni of our institute are performing their duties include Drug regulatory authority of Pakistan, Aga Khan University Hospital, South city Hospital, NMC Hospital, NIBD, Kiran Hospital, Indus Hospital Korangi, leading pharmaceutical manufacturing companies and many others. Several graduates are also playing their roles in industrial pharmacy and working in multinational and local pharmaceutical industries including Abbot, GSK, Brookes Pharma (Private) Limited, Bosch Pharmaceuticals, The Searle Company Ltd., Hilton Pharma (Pvt) Ltd, AGP Limited, among many others.

NOTABLE ALUMNI OF DUHS, CONSTITUENT COLLEGES

1. **Dr. Bhavita Kumari, Master's in Public Health (M.P.H.) 2012 – 2015**



School of Public Health- Dr. Bhavita Kumari has pursued a Ph.D. in Public Health at Tulane University's School of Public Health and Tropical Medicine, New Orleans, USA. Her Ph.D. dissertation explores reproductive behaviors in Pakistan through the lens of empowerment and partner violence. She received the Fulbright Foreign Student Scholarship for her Ph.D. studies and the John Snow Inc fellowship award for her dissertation work. She has received her MBBS and Master in Public Health from DUHS,

Karachi, Pakistan. She has vast experience in teaching, research, and project management while working on various projects with international organizations like the International Committee of the Red Cross, Médecins Sans Frontières, and USAID/D4I and NIH grants. Currently, she is working at the Institute of Global Health and Development at Aga Khan University. Her research interests include exploring population-level determinants of women's health, including climatic vulnerability, and access and utilization of healthcare services.

2. **Umber Saeed, Pharm D. – 2015, Dow College of Pharmacy (DCOP), Internal Control Framework Excellence Manager, Global Clinical Operations GSK**



3. **Owais Sulaiman, Pharm D. – 2012, Dow College of Pharmacy (DCOP), Manager Quality Assurance, Roche Pakistan**



4. **Umar Akram, Pharm D. –2013, Dow College of Pharmacy (DCOP), Executive Manager Production, Sterile Manufacturing, Sanofi Pakistan**



5. **Anusha Amanullah, Dow College of Biotechnology, (Class of 2020)**, International Publications:5; Impact factor: 46.35; Cross Citation: 380. She has a grant funded by VCSFI for “Error Rate and Coefficients Quantification of Neurological Defects due to Consanguineous Mating using Drosophila melanogaster Model” (VCSFI-2021), Grant No: DUHS/VC/2021/11-61 (0.25 million PKR-1Yr-Dated: 19-09-2021). Training: She was selected for the training on CRISPR-CAS Mediated Genome Editing at Center for Advanced Studies in Agriculture and Food Securities, Faisalabad (February 2022).



6. **Ayesha Aslam, Class of 2021. Dow College of Biotechnology** International Publications: 02; Impact factor: 7.96; Cross Citation: 03



7. **Hadiqa Arshad, (Class of 2020); Dow College of Biotechnology.** Grant acquired on the “Development of Drosophila melanogaster-Based Assay System for Screening of Carcinogenic Compounds”, funded by the Vice Chancellors' Seed Funding Initiative-2021(VCSFI-2021), DUHS, Karachi-Pakistan; Grant No: DUHS/VC/2021/11-61 (0.25 million PKR-1Yr-Dated: 19-09-2021).



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CHAPTER 10

Sports

10.1. INTER-DEPARTMENTAL SPORTS AT DUHS

Every year, DUHS schedules Sports Week so that the maximum number of students and faculty can participate in sporting activities as part of their co-curricular activities. A state-of-the-art gymnasium and cricket ground at Dow University is available where the students can play during and after college hours, as part of their co-curricular activities.

DUHS has provided regular sessions for training students with expert coaches who can groom these players to shine nationally and internationally. During the last few years, with the growth of the university, the faculty participation in sporting activities has also taken place. Therefore we also held faculty matches in which most of the faculty also participated with enthusiasm.

DUHS sporting activities include fitness facilitation to regular training sessions and provide support to athletes so they can progress to the highest sporting level whilst studying at Dow University of Health Sciences. During the annual sports week, various events also take place like English and Urdu Debating competitions, Declamation contests, Literary Festival etc.

Outdoor track events like cricket (for both boys and girls), football, running races, shot put, javelin throw are offered for students to participate; whereas, indoor events, like basketball, throw ball, netball, badminton, and table tennis are offered within the state-of-the-art Gymnasium at the Ojha Campus.

EVENT	DATE	MATCH and WINNER
Dow Premier League	May 24, 2022	Cricket Match Male Champions DIMC Female Champions SDGP
Cricket Match	March 28, 2022	Friendly cricket Match between faculty of DDC and students of DDC. Match was draw
Prize distribution of 7th Inter University DSU Badminton Championship at DHA Suffa University	March 24, 2022	Dow University of health sciences emerge as first Runner up
Pakistan Day Celebration and Prize distribution of Indoor Games Championship for DUHS faculty	March 22, 2022	Successful event with more than 2000 views on social media.
Throw ball Match	March 19, 2022	Friendly Throw ball Match between female students of IBHM and female students of DIMC Winners DIMC
Volleyball Match	March 17, 2022	Friendly Volleyball Match between Seniors male students of Ojha campus and juniors male students of DMC campus Winners Seniors

Cricket Match	March 17, 2022	Friendly cricket Match between faculty of IBHM, DUHS and faculty of Bahria University Winners IBHM, DUHS
Table Tennis Tournament at Szabist Olympiad	March 15, 2022	Students of DIMC, DUHS participated and reached in semifinals at Szabist Olympiad.
Trial Table Tennis	February 16, 2022	Male and Female teaching faculty
Trial Badminton	February 17, 2022	Male and Female teaching and non-teaching faculty
Pool Match Chess	February 18, 2022	Male and Female teaching and non-teaching faculty
Pool Match Table Tennis	February 19, 2022	Male and Female teaching faculty
Pool Match Badminton Female	February 21, 2022	Female faculty
Pool Match Badminton Male	February 22, 2022	Male teaching and non-teaching faculty
Indoor Games Championship for DUHS Faculty		
Inauguration	February 23, 2022	Successful inauguration with hoisting of first ever DUHS sports flag
Finale Chess	February 25, 2022	Winner Dr. Shahkamal Hashmi Runner up Mr. Azeem Sharif
Finale Table Tennis	February 25, 2022	Winner Male Dr. Sohail saadat Runner up Male Dr. Atif Majeed Winner Female Dr. Taskeen Khan Runner up Female Dr. Tamseel Awan
Finale Badminton	February 26, 2022	Winner Teaching faculty Male Dr. Sohail saadat Runner up Teaching faculty Male Dr. Atif Majeed Winner Teaching faculty Female Dr. Sumaiya Shabbir Runner up Teaching faculty Female Dr. Ume Amen Winner Non-Teaching faculty Male Mr. Fahad Shareef Runner up Teaching faculty Male Mr. Muneeb Raza



Dow University of Health Sciences

We are excited to announce

Indoor Games Championship 2022 for DUHS Faculty



BADMINTON



CHESS



TABLE TENNIS

Tournament Director



Dr. Mehnaz Nuruddin Gitay
Director Sports DUHS

**Last Date for Registration
February 10th, 2022**

for Details and Registration Contact :
Ramsha Rashid (Extension-2834)
Visit Sports Complex
ramsharb6@gmail.com

Venue: Sports Complex, Ojha



DOW UNIVERSITY OF HEALTH SCIENCES

*You are cordially invited at the Opening
Ceremony of*

Dow Premiere League



Under the sporty patronage of our Vice Chancellor,

Prof. Dr. Saeed Quraishy

Graced by Pro Vice Chancellor,

Prof. Dr. Nusrat Shah

On Tuesday, May 24, 2022



At Cricket Ground Ojha

Timing: 09:00 AM Onwards

INVITATION





10.2. PARTICIPATION IN NATIONAL CHAMPIONSHIPS

- Mr. Bilal, student of BS Biotechnology program, Dow College of Biotechnology achieved the **246th** position in the Marathon Race (out of **4000** participants) from all over Karachi in the 3rd Commissioner Marathon on 23rd January 2022.

Congratulations to all student athletes and athletic faculty who participated.



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CHAPTER 11

Universities Building Leadership

11.1. FACULTY LEADERSHIP

Awards and Representation in Government Policy making committees, memberships on various councils etc.

Faculty Leadership Awards of faculty members are mentioned below:

Name of Faculty Member	Title of Award	Year	Name of Org.
Prof. Mohammed Saeed Quraishy	Tamgha e Imtiaz	August 2020	Government of Pakistan, awarded by President Dr. Arif Alvi.

Representation in Govt. Policy Making Committee (FY 2021-22)

Name of Faculty Member	Name of Committee / Representation	Name of Org.
Dr. Saifullah Baig	Strategic Treatment Advisory Group (STAG)	National TB Control Program, Ministry of Health, Pakistan.

Membership in Various Associations/Councils (FY 2021-22)

Name of Faculty Member	Status	Name of Council/ Body
Prof. M. Saeed Quraishy	President, PSG & GIE	Pakistan Society of Gastroenterology & GI Endoscopy
Prof. Riffat Jalil	Life Member	Society of Obstetricians & Gynaecologists Pakistan;
	Member	Pakistan Uro- Gynecology Association;
	Member	International Uro- Gynaecology Association
Prof. Atiq ur Rehman	Board of Directors	Pakistan Society Therapy Association (PPTA)
Prof. Muhammad Shuja Farrukh	President	Pakistan Society of Otorhinolaryngology, Sindh Chapter
Dr. Izhar Hussain	Member	Peer review committee of National Business Education Accreditation Council (NBEAC).
	Chairman	Institute of financial markets of Pakistan (IFMP)
Prof. Dr. Arshad Hasan	Migration PMDC Syndicate, IRB, Committee	Pakistan Medical Commission
Dr. Rabya Munawar	Ex. Executive member	Pharmacy Council of Sindh

Dr. Wajiha Gul	Editorial Board Member	ARC Journal of Pharmaceutical Sciences
Prof. Naresh Kumar	Co-opted member Standing Recognition Committee (Dental)	Pakistan Medical Commission (PMC)
Prof. Noor Jahan	Secretary	Pakistan Pharmacist Association (PPA) Central
Dr. Meha Fatima Aftab	Member Board Member	Mediterranean Neuroscience Society Pharmacology, Baqai Medical University
Dr. Faryal Salman	Member	Peer review committee of National Business Education Accreditation Council (NBEAC)
Prof. Asif Qureshi	Member	American Society of Microbiology American Association of Molecular Pathology. Karachi Cancer Registry Pakistan Biological Safety Association.
Dr. Ambreen Fatima	Member	Medical Microbiology & Infectious Diseases Society of Pakistan American Society of Microbiology Pakistan Biological Safety Association
Dr. Fouzia Zeeshan	Member	American Society of Microbiology. Pakistan Biological Safety Association. Pakistan Society of Microbiology
Dr. Fatima Fasih	Member	Medical Microbiology & Infectious Disease society of Pakistan
Prof. Dr. Uzma Bukhari	Member	Pakistan Association of Pathologist
Dr. Shaima Sultana	Member	Pakistan Association of Pathologists Health Professionals Council of SA Pakistan Medical Council
Dr. Fatima Fasih	Member	Medical Microbiology & Infectious Disease society of Pakistan
Prof. Fehmina Arif	Life Member Treasurer Vice President Trustee	Pakistan Pediatric Association KONPAL (Child Abuse Prevention Society) HELP (Health Education and Literacy Program) Child Life Foundation
Dr. Waseem Jamalvi	General Secretary	Pakistan Pediatric Association (Sindh Branch)
Dr. Abid Hussain	Life Member	Pakistan Pediatric Association
Dr. Faizia Nasim	Life Member	Pakistan Pediatric Association
Dr. Anny Hanifa	Life Member	Pakistan Pediatric Association

Prof. Dr. Muzamil Shabana Ejaz	Life Member	Pakistan Pediatric Association
Dr. Ayesha Saleem	Life Member	Pakistan Pediatric Association
Dr. Hafiza Sania	Life Member	Pakistan Pediatric Association
Dr. Fakhshena Anjum	Vice President	Pakistan Pharmacists Association, Sindh Chapter.
Prof. Sumbul Shamim	Member	Independent Ethics Committee (IEC) International Centre for Chemical and Biological Sciences (ICCBS) Dr. Panjwani Centre for Molecular and Drug Research (PCMD), University of Karachi. American Society of Gene and Cell Therapy (ASGCT) American Society of Experimental Pharmacology and Therapeutics (ASPET)
Prof. Ambrina Qureshi	Reviewer Honorary Editorial Board	Scientific Manuscripts published by PLOS-One, Elsevier and JPDA; Journal of Pakistan Dental Association.
Prof. Muhammad Arif Mateen	Member Overseas Member	Association of Paediatrics Surgeons of Pakistan (APSP) British Association of Paediatric Surgeons Pakistan Association of Paediatric Nephrologists
Dr. Muhammad Sajjad Ashraf	Member	Association of Paediatrics Surgeons of Pakistan (APSP)
Dr. Syed Waqas Ali	Member	Association of Paediatrics Surgeons of Pakistan (APSP)
Dr. Faisal Yameen (PT)	Board of Directors Sindh Chapter	Pakistan Society Therapy Association (PPTA)
Dr. Atiq Ur Rehman (PT)	Board of Directors	Pakistan Society Therapy Association (PPTA)
Dr. Salik Rasool	President	Sindh Council, Pakistan Society of Maxillofacial Pathology
Dr. Umesh Kumar	Information Secretary	PPTA (Sindh Chapter)
Dr. Khurram Pervaiz	IPE (External Evaluator)	Higher Education Commission, Pakistan
Ms. Sanam Soomro	IPE Evaluator & Postgraduate Program Reviewer	Higher Education Commission, Pakistan

11.2. STUDENT LEADERSHIP

Co-curricular Activities: University Dramas, Exhibitions, Expos, Competitions & Debates at National and International Levels

Students participated in various competitions held all over the country by different institutes.

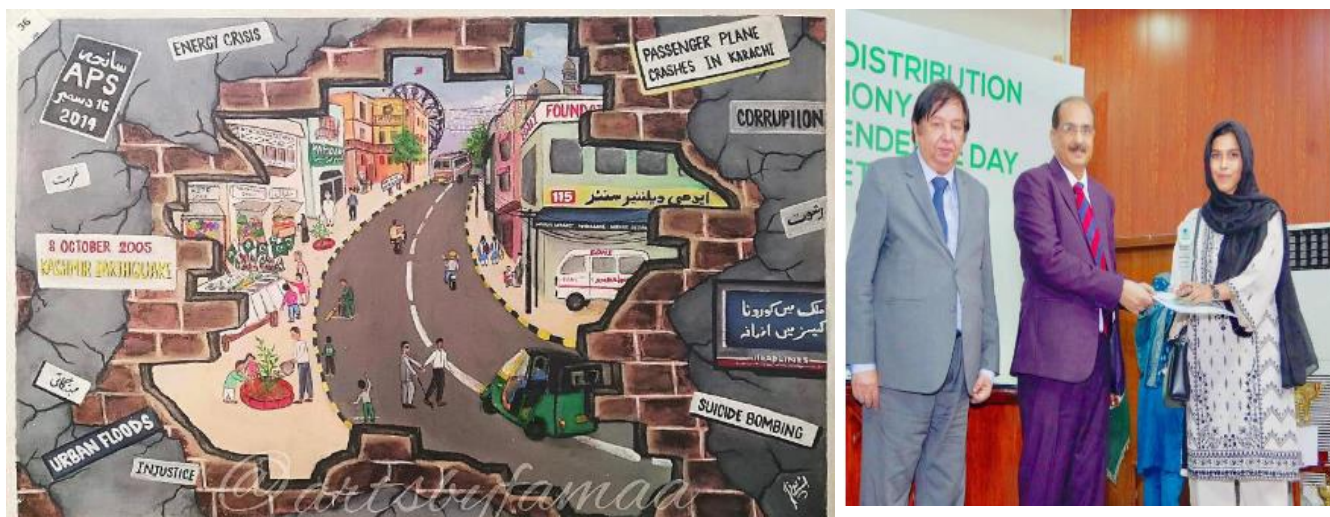
S #	Date	Event Name	Organized By	Position
1.	16th June, 2022	National Inter-University competition, Painting Category	Higher Education Commission	3rd Position
2.	March, 2022	Agha Hasan Abedi Declamation Competition	Fast University	3rd Position
3.	February, 2022	Speak Karachi Declamation Contest		2nd Position
4.	February, 2022	Painting Competition	Study Aid Project	1st Position
5.	January, 2022	All Pakistan Writing Competition, Urdu Afsana Nigari	Islah-e-Nizam Taleem Muhim	2nd Position
6.	7 December, 2021	All Karachi Bilingual Declamation Competition	Karachi University Debating Society	1st Position (English Category) 2nd Position (Urdu Category)
7.	November, 2021	Elocution Contest "Humara Andaz"	Al Hadi Welfare	1st & 3rd position in Ghazal Category, 1st & 2nd position in Prose Category & Overall Best
8.		poster and model competition	Karachi University	3 rd Position
9.	October, 2021	All Karachi Tetra-lingual Essay Writing Competition, English Category	Karachi University Debating Society	1st Position
10.	October, 2021	Speech Competition	QTV- ARY	Participation
11.	September, 2021	All Karachi Parliamentary Debate Championship	Speak Karachi	Semi Finalists
12.	August, 2021	Urdu Poetry Contest	Students Aid Society;	1st Position
13.	August, 2021	PIEAS Literary Festival English Poetry Writing	Pakistan Institute of Engineering and Applied Sciences, Islamabad	3rd Position (Urdu Afsana) 2nd Position (Rhyming)
14.	July 2021	British Parliamentary Debate	JSMU Literary Society	1 st Position
15.	5th July, 2021	Inkspell All Pakistan English Creative Writing Competition	Khwabeeda - English Literature and Arts Society (Dera Ghazi Khan Medical College)	Participation
16.	2021	Children Story Competition	8th Hareem e Adab Convention	1st Position

School of Public Health (SPH)

Prize Winner of National Inter-University competition in Painting category, Pakistan Independence Day Competitions 2021 organized by HEC

The Higher Education Commission, Pakistan organized an Inter-University thematic competition on the account of Pakistan Independence Day 2021. Fatima Ahmed, undergraduate student of **BS- Nutrition program at SPH, DUHS** participated in All Pakistan university competition in the Painting Category on theme 'Hum Zinda Qoum Hain'. The event was held on 16th June 2022 at the HEC Head Office Auditorium, Islamabad.

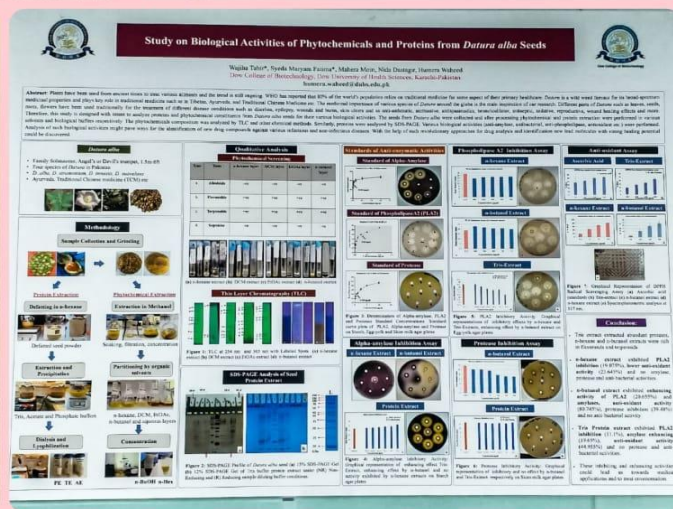
Fatima won 3rd Prize in the National Inter-University Competition in the Painting category. She received a shield, certificate and Prize money worth PKR 50,000.



Dow College of Biotechnology (DCOB)

Student Scientific Awards and Co-Curricular Activities

1. Ms. Wajiha Tahir and Ms. Syeda Maryam Fatima won 3rd Prize in Poster Presentation at 1st International Conference of Biotechnology, Department of Biotechnology, University of Karachi (16-17th March, 2022).
2. Mr. Mubashir Khan won Best Oral Presentation Award at 3rd Probe 2022 Conference, Department of Physiology, University of Karachi (21-23rd February, 2022).
3. Genetic Polymorphism in the SARS-CoV-2 Host Partner Proteins, 3rd Prize at 10th International Conference on Endorsing Health Science Research, University of Karachi (5th January, 2022).
4. Evolution of the Chitinase in Insectivorous Plants, Best Poster Presentation Prize at 10th International Conference on Endorsing Health Science Research, University of Karachi (5th January, 2022).
5. Structural Variation in Ventricular Septal defects associated with CITED2 variants, Best Poster Presentation Prize at 10th International Conference on Endorsing Health Science Research, University of Karachi (5th January, 2022).
6. Ms. Anusha Amanullah, Alumni (2020) and Current M. Phil Biotechnology Scholar selected for the Training on CRISPR-CAS Mediated Genome Editing at Center for Advance Studies in Agriculture and Food Securities, Faisalabad (February 2022).





DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

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CHAPTER 12

Finance

FINANCIAL YEAR AT GLANCE (2021-2022)

DUHS approved the Strategic Plan (2019-2030), under which we have built, rehabilitated, remodeled and expanded physical and technological infrastructure that had outlived its utility. The new facilities at both the campuses, expanded rapidly, can now easily last for the next ten years. As far as the financial year at a glance, DUHS ended the last fiscal year 2021-22 with an overall **deficit of Rs. 346.19 million**.

As per direction of the office of the President of Pakistan and the Higher Education Commission of Pakistan, we have already implemented the strengthening of financial management systems with complete ERP solution Microsoft Dynamics 365, capable of providing accurate and timely financial information necessary for taking informed decision making, that will eliminate administrative efforts and increase efficiency, internal control and sustainability.

12.1. APPROVED BUDGET

Rs. in Million

	Particular	Approved Budget 2021-22	Revised 2021-22
12.1	Annual Statement of Accounts	Annual Statement of Accounts for F.Y. 2021-22 is in progress.	
12.2	Recurring Budget	4,748.682 (m)	4,372.746 (m) (Annex: I)
12.3	Self-Generated Income	3,761.269 (m)	3,436.777 (m) (Annex: II)
12.4	ERP related activities	Implemented (Financials, Procurement, Inventory Management, HRMS, HMFS)	
12.5	Trend per Student Spending	Revised Expense (Rs. 4,372.746 million / 7954 Students) =	2021-22
			0.55 million per student
12.6	Development Budget HEC	HEC Rs. 50.00 (million)	
		UDWP Rs. 203.201 (million)	

12.2. FINANCIAL YEAR AT GLANCE (2021-2022)

A- RECEIPTS:

As per Revised, total receipts for the FY 2021-22 decreased by 8.31% as compare to Budget Estimates 2021-22, mainly due to the following factors:

Rs. in Million

Particulars	BUDGET 2021-22	REVISED 2021-22	Increase/ (Decrease)
HEC	597.43	597.43	0.00
Grant for TTS	5.87	7.78	1.91
Provincial Govt. Grant	150.00	124.00	(26.00)
Any Other Grant		2.40	2.40
Self-generated income	3,761.27	3,436.78	(324.49)
Total	4,514.57	4,168.38	(346.19)

B- EXPENDITURES:

The Revised Expenditure for 2021-22 have seen a decrease of 8.60% as compared to Budgeted Estimates 2021-22. A summarized comparison of different expenditure heads is as follows:

(Rs. In Million)

Description	BUDGET 2021-22	REVISED 2021-22	Difference
Pay & Allowances	2,683.77	2,642.42	(41.35)
Communication	23.24	22.43	(0.81)
Utilities	177.11	176.99	(0.12)
Occupancy Cost	99.93	99.47	(0.47)
Travel & Transportation	221.04	139.80	(81.25)
Operating Expenses	686.07	559.40	(126.68)
Employees Retirement Benefits	230.00	194.86	(35.14)
Repair & Maintenance	267.56	218.60	(48.96)
Research & Feasibility Studies	56.32	56.20	(0.12)
Financial Assistance / Scholarship	84.00	76.07	(7.92)
Entertainments & Gifts	5.00	4.30	(0.70)
Physical Assets	114.53	98.34	(16.19)
Civil Work	80.00	68.20	(11.80)
Others	20.11	15.68	(4.43)
Total	4,748.68	4,372.74	(375.94)

12.3. AUDIT REPORT

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2020-21
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DUHS DOCUMENT DISPATCH MANAGEMENT SYSTEM



RECIPEINT NAME :

dc dispatch

DISPATCH DATE :

19/11/2021 09:57:25am

SENDER NAME :

hq.registrar - D.U.H.S HEAD OFFICE - 1846

Registrar Secretariat 22-11-21 1:11

PRIORITY :



DEPARTMENT OF THE AUDITOR GENERAL OF PAKISTAN

OFFICE OF THE

DIRECTOR GENERAL AUDIT SINDH

1st Floor, Pakistan Audit & Accounts Complex, Gulshan-e-Iqbal, Block-II,
Main University Road, Karachi.

Ph: 021-99244751, Fax: 021-99244855

No DGAS/CS-VIAIR/32-4/2020-21/114

Dated: 12 / 11 / 2021

The Vice Chancellor,
Dow University of Health Sciences,
Karachi

Subject: ANNUAL AUDIT INSPECTION REPORT ON THE ACCOUNTS
MAINTAINED BY VICE CHANCELLOR, DOW UNIVERSITY OF
HEALTH SCIENCES, KARACHI FOR THE FINANCIAL YEAR 2020-21.

A copy of the Audit Inspection Report on the accounts of your office for the
year 2020-21 is enclosed as Annexe-A. The annotated reply to the report may please
be furnished to this office within two weeks of receipt of this letter.

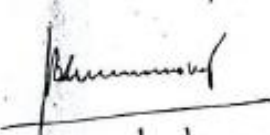
Receipt of this letter may please be acknowledged.

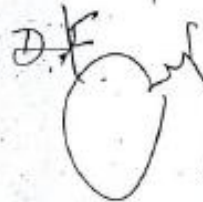
Enclosure: Annexe-A

Copy to the Secretary, Universities & Boards, Government of Sindh, Karachi along with
the Audit Inspection Report, for information and necessary action.


DIRECTOR


DIRECTOR


22/11/2021


22/11/2021


22/11/2021

AUDIT & INSPECTION REPORT ON THE ACCOUNTS RECORD OF VICE CHANCELLOR, DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI FOR THE FINANCIAL YEAR 2020-21

INTRODUCTION

Audit on the accounts record of the office of the Vice Chancellor, Dow University of Health Sciences, Karachi for the Financial Year 2020-21 was conducted by the Audit Party of the office of the Director General Audit Sindh, Karachi, headed by Mr. Hasnain Vistro, Assistant Director, assisted by Mr. Masood Ahmed, Assistant Audit Officer and Mr. Wali Mohammed, Senior Auditor during the period from 25.08.2021 to 31.08.2021

The audit was conducted on test check basis. The result of the audit is as under.

INCUMBENCY

The following officers held the charge of head of the office as well as Drawing & Disbursing Officer of the local office during the period mentioned against their names:

Name	Designation	Period
Pro. Mohammad Saeed Qureshi	Vice Chancellor	02.05.2017 to date
Dr. Ashar Afaq	Registrar	16.03.2020 to date
Mr. Mujahid Ali Shaikh	Director Finance	30.12.2019 to date

SECTION - I (PREVIOUS AUDIT)

Previous audit for the year 2019-20 was conducted by Audit Party of the office of the Director General Audit Sindh, Karachi headed by Rahim Bux, Audit Officer, report issued to local office but no further progress was reported.

SECTION - II (CURRENT AUDIT)

From next page,.....

12.4. RECURRING BUDGET (2021-2022)

Rs. in Million

Code No.	Budget Heads	2021-22 (Budget)	2021-22 (Revised)
A012	Pay & Allowances	2,683.769	2,642.416
A031	Fees	11.608	7.620
A03101	Bank Fees	3.000	2.860
A03102	Legal Fees	8.608	4.760
A032	Communication	23.242	22.430
A03201	Postage and Telegraph	1.815	1.100
A03202	Telephone & Trunk Calls	3.427	3.420
A0320402	PERN	12.000	12.000
A0320403	Internet Charges	5.000	5.000
A03205	Courier and Pilot Services	1.000	0.910
A033	Utilities	177.110	176.990
A03301	Gas	69.629	69.610
A03302	Water	17.111	17.010
A03303	Electricity	90.370	90.370
A034	Occupancy Costs	99.934	99.465
A03407	Rates and Taxes	1.010	0.985
A03410	Security Charges	35.076	34.690
A03470	Other Occupancy Cost-Janitorial Services	63.848	63.790
A036	Motor Vehicles	6.500	6.340
A03602	Insurance	3.500	3.410
A03603	Registration	3.000	2.930
A037	Consultancy & Contractual Work	2.000	1.720
A03770	Others	2.000	1.720
	Tax Consultancy	1.000	0.810
	Other Consultancy	1.000	0.910
A038	Travel & Transportation	221.044	139.796
A03801	Training - Domestic	20.300	3.800
A03802	Training - International	20.500	
A03805	Traveling Allowance - TA/DA	1.575	1.530
A03807	P.O.L. Charges	16.045	15.980
A03820	Others/Transportation Expense	162.624	118.486
A039	General Operating Expenses	686.071	559.395

A03901	Stationery	6.500	4.380
A03902	Printing and publications	4.600	4.200
A03903	Conferences / Seminars / Workshops / Symposia	5.700	
A0397006	Convocation Expenses	11.903	11.340
A03905	Newspapers Periodicals and Books	23.826	6.100
A03906	Uniforms and Protective Clothing		
A03907	Advertising & Publicity	31.845	7.025
A03913	Contributions & Subscriptions	34.924	10.100
A03919	Payments to Other services rendered - Audit Fee etc.	10.000	
A0394204	Specific Consumable	12.500	12.410
A03959	Stipends Incentives etc.	360.000	335.000
A03970	Others		
A0397002	i. Operational Cost-Office of Research Innovation & Commercialization (ORIC)	50.590	48.210
A0397003	ii. Operational Cost of Quality Enhancement Cell (QEC)	16.319	16.210
A0397005	iv. Conduct of Examinations	36.000	34.810
A0397006	v. Sports Activities	0.100	0.980
A0397008	vii. Remuneration to Part-time Teachers / Visiting Faculty	13.264	13.120
	Medical Charges	68.000	55.510
A03	Total Operating Expenses	1,227.509	1,013.756
A04	Employees Retirement Benefits	230.000	
A04102	Commuted Value of Pension	160.000	158.200
A04114	Superannuation Encashment of LPR	50.000	21.310
A04170	Others-Assistance Package for Families of Employees	20.000	15.350
A13	Repair and Maintenance	267.555	218.600
A13001	Transport	8.118	8.030
A13101	Machinery & Equipment	25.115	24.850
A13201	Furniture & Fixture	14.568	13.210
A13301	Office Buildings	120.000	93.200
A13302	Residential Buildings	1.700	1.300
A13701	Hardware	60.00	48.300
A13702	Software	30.00	22.200
A13703	I.T. Equipment	3.264	2.830
A13920	Others - Repair	4.790	4.680
A021	Feasibility Studies		
A02101	Feasibility Studies		
A022	Research Survey & Exploratory Operations	56.318	56.200
A02201	Research and Survey	56.318	56.200
A061	Financial Assistance/ Scholarships	83.997	76.074
A06101	Merit Scholarships		

A0610102	Need Based Scholarships	26.884	26.884
A06102	Other Scholarships		
	HEC Ehsaas Scholarship	49.190	49.190
	NEST	5.293	
	Patient Aid Foundation	0.880	
	Professional Education Foundation	1.750	
	Loan to Students		
A06103	Cash Awards - for Meritorious Services		
A063	Entertainments and Gifts	5.000	4.300
A06301	Entertainments	5.000	4.300
A09	Expenditure on Acquiring of Physical Assets	114.531	98.340
A09201	Hardware	45.000	41.210
A09202	Software		
A09203	Purchase of I.T. Equipment	25.00	23.200
A09501	Purchase of Transport	20.00	12.200
A09601	Purchase of Plant & Machinery	6.800	5.600
A09701	Purchase of Furniture & Fixture	8.100	7.350
A09470	Others	9.631	8.780
A124	Civil Works - Buildings & Structures	80.00	68.200
A12405	Electrification Plumbing and Other Infrastructure	80.00	68.200
	Total Expenses	4,748.682	4,372.746

12.5. SELF-GENERATED INCOME (2021-22)

RS. IN MILLION

Code No.	Budget Heads	2021-22 (Budget)	2021-22 (Revised)
C02813	Education General Fees [301 - 390]	3,553.480	3,311.300
C0281301	Admission Fees	51.339	48.200
C0281306	Tuition Fees - Regular Fee Structure	529.543	496.000
C0281311	Tuition Fees - Self-Support Scheme	580.292	532.000
C0281316	Tuition Fees - Self-Financing Scheme	2,318.400	2,183.000
C0281332	Examination Fees - University On Campus Students	10.100	9.100
C0281346	Degree / Transcript Fee etc.	3.100	2.800
C0281361	Income from Continuing Professional Development Courses for Business & Community	6.078	4.800
C0281380	Course Fees - 'Postgraduate Diploma'	8.878	5.500
C0281382	Course Fees - 'Special / Short Courses'	1.020	0.800
C0281390	Other Misc. Fees from Students	44.730	29.100
C02812	Hostel Fees / User Charges [201 - 226]	35.300	30.300
C0281206	Hostel Room Rent	15.200	13.100
C0281221	Income from Transport / Buses	20.100	17.200
C02810	Income from Endowments	25.000	
C02815	Income from Services Rendered [501 - 531]	48.400	
C0281501	Income from Collaborative Research - Domestic	27.500	60.000
C0281521	Income from Contract Research - Commercial Businesses [non-SMEs]	20.900	32.000
C02818	Others [809 - 870]	99.090	95.177
C0281809	Affiliation Fees Received from Other Institutions	15.052	18.612
C0281840	Rent / Lease of University Buildings / Shops etc.	1.925	1.925
C0281860	Interest on Investments / Cash Balances etc.	15.00	15.500
C0281870	Scholarship Income – HEC Ehsaas Program	49.190	49.190
	Scholarship Income-NEST	5.293	
	Scholarship Income-Patient Aid Foundation	0.880	
	Scholarship Income-Professional Education Foundation	1.750	
C0281870	Other Misc. Receipts	10.000	9.950

12.6 STUDENT FINANCIAL AID:

Dow University of Health Sciences, Karachi, has established a University Advancement Cell and Financial Aid Office for the financial facilitation/assistance to the students. The University is engaged in the process of increasing the number of funding organizations / philanthropists and signing MOUs with them.

The University future planning is to enhance the duration of refunding amount of scholarships and develop a new fee structure with emphasis on minimizing the burden of the scholarship awardee, to increase promotional activities through workshops, seminars, social media etc. and to arrange awareness sessions of different funding agencies with students, so that they may explain their program to students directly.

Financial Aid Provided to Students in 2021-2022:

S #	Institution/Organization Offerings Financial Aid/ Scholarships To DUHS Students	No of Students provided Scholarship	Type of Assistance
1	Ehsas Scholarship	363	Scholarship
2	HEC Need Based Scholarship	33	Scholarship
3	NEST Scholarship	12	Scholarship
4	British Consulate (Scotland) Scholarship	5	Scholarship
5	Abdullah T. Wehwaria and Farhat Aleem Trust Scholarship	5	Scholarship
6	Balochistan & Fata Scholarship	43	Scholarship
7	Board of Intermediate Scholarship	-	Stipend
8	Dr. Abdul Aziz Khan Scholarship	8	Scholarship
9	HEC Scholarship for Afghan National Students	27	Scholarship
10	Professional Education Foundation (PEF)	13	Scholarship/Interest Free Loan/Zakat
11	Sindh Endowment Education Scholarship	18	Scholarship
12	University of Karachi Alumni Association (UKAA)	51	Scholarship
13	Pakistan Bait ul Maal	2	Stipend/Zakat
14	Ihsan Trust	25	Interest Free Loan
15	DUHS Financial Assistance	11	Financial Assistance

16	Zahid Bashir	14	Scholarship
17	Sindh Indigenous HEC	13	Scholarship
18	Dr. Abdul & Zarina Hafeez Sheikh	11	Scholarship
19	Zakat & Ushr	11	Zakat
20	Pak Sri lanka HEC Scholarship	24	Scholarship
21	Pendency of Scholarship of Foreign Students Under Pakistan Technical Assistance Program (PTAP)	19	Scholarship
22	District Council	5	Scholarship
23	Midwifery (UNFPA)	38	Scholarship



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CHAPTER 13

University Governance

The Governance mechanism of the University is strong with regular meetings of the statutory bodies, as listed below.

13.1. SYNDICATE MEETINGS:

i. 91st meeting of Syndicate held on Saturday, 25th June, 2022
ii. 90th meeting of Syndicate held on Saturday, 2nd April, 2022
iii. 89th meeting of Syndicate held on Saturday, 29th January, 2022
iv. 88th meeting of Syndicate held on Saturday, 13th November, 2021
v. 87th meeting of Syndicate held on Thursday, 30th September, 2021

13.2. ACADEMIC COUNCIL MEETINGS:

i. 23rd (Online) Meeting of Academic Council on Saturday, 11th September, 2021
ii. 24th Meeting of Academic Council held on Tuesday, 15th March, 2022

13.3. BOARD OF ADVANCED STUDIES AND RESEARCH MEETINGS:

i. 67 th meeting of the Board of Advanced Studies and Research held on 14 th April, 2022.
ii. 66 th meeting of the Board of Advanced Studies and Research held on 19 th November, 2021.
iii. 65 th meeting of the Board of Advanced Studies and Research held on 16 th August, 2021.



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CHAPTER 14

Office of Resource Generation / Development

The Vice Chancellor of Dow University of Health Sciences leads the functions of Resource Generation & Development. He has assigned this responsibility to staff of the Dept. of Alumni and Marketing Communications to organize, administer and manage projects regarding resource generation.

14.1. NEW INITIATIVES & PLANS FOR IMPLEMENTATION

Department of Alumni and Marketing communications is persistently working on the Alumni engagement, industry relationships and fundraising activities.

The Alumni and Marketing Communications department is meeting corporate heads for university and industry connections.

Corporate Engagements with over 70 companies, banks and corporate heads are contacted for corporate engagements with DUHS. Furthermore, an extensive Ramadan Zakat Campaign was carried out to create awareness about services offered at the Dow University Hospital, and affiliated hospitals and clinical care service centers of the Dow Health System.

14.2. FUTURE PLANS FOR DEVELOPMENT

• Alumni Engagement Tools:

- Establishment of an Alumni Database for future fundraising and resource generation activities.
- Initiation of Alumni Membership Card as an alumni engagement tool to build alumni relationships with DUHS and alumni located all over the world.
- An Alumni engagement app is also developed.
- MOU/NDA with 1 link: An NDA/MoU is signed with the 1 link, which is Pakistan's first fully licensed Payment System Operator and Payment Service Provider. 1LINK will provide a payment gateway, the subscription charges will be waived off.
- Meezan Bank as Payment Gateway for Free Payment Solution for donations/payments

Activities of Zakat / Donations: The Alumni and Marketing Communications Department initiated the Facebook campaign on Jan 24, 2022. The Campaign has generated around 11 million so far.

NEWS & EVENTS

Farewell Dinner In Honor of Retired Faculty Of Dow University of Health Sciences: Friday, 03rd December 2021



A Farewell Dinner was hosted at DUHS, DMC Campus to appreciate the services of the Faculty which retired during the time period of April 2017 to December 2021. Since faculty is a very important asset of any University and this needs to be acknowledged, cherished, and

honored for its significance in shaping the future and quality education of our students. In this regard, Dow University of Health Sciences hosted a Farewell Dinner on **Friday, 03rd December 2021** at the **Dow Medical College** campus. 83 retired faculty members were invited along with their spouses. They were honored with the award of shields during the ceremony. This was followed by a musical evening to entertain the guests.

The most notable senior faculty invited included **Prof. Mohammed Saeed Quraishy** Meritorious Prof. of Surgery and Vice Chancellor DUHS, **Prof. Zarnaz Wahid**, Meritorious Professor of Dermatology, **Prof. Kartar Dawani**, Prof. of Pathology-HOD and former Principal DMC, **Prof. Khawar Jamali**, former **Prof. of Surgery**, and **Prof. Nusrat Shah**, Prof. of Gynecology, **Prof. Abu Talib**, retired Prof. of Medicine and former Principal of DMC among others. The event was also attended by the honorable Principles, Directors, and Deans of the constituent institutes of DUHS with their spouses, however, the event was organized and attended following all relevant COVID-19 SOPs.

Some glimpses can be seen through the following pictures:





DOW UNIVERSITY OF HEALTH SCIENCES, KARACHI

DUHS

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CHAPTER 15

Health Center / Medical Facilities

15.1. MEDICAL FACILITIES OF DOW UNIVERSITY OF HEALTH SCIENCES

Dow University Health System, a clinical services unit of Dow University of Health Sciences is the largest and the most comprehensive healthcare provider of tertiary clinical care in the region. Anchored by Dow University Hospital, the System is comprised of Dow Institute of Radiology, Dow Diagnostic Research & Reference Laboratory, OJHA Institute of Chest Diseases, Dr. Abdul Qadeer Khan Institute of Behavioral Sciences, Institute of Physical Medicine & Rehabilitation, National Institute of Diabetes & Endocrinology, National Institute of Liver & GI Diseases, and Dr. Ishrat-ul-Ebad Khan Institute of Blood Diseases.

Dow University Hospital (DUH) was established in 2009 as a tertiary care teaching and training facility for students, residents and fellows in medicine, pharmacy, nursing, dental, and other allied health sciences. With a capacity of over 500 beds, DUH is the only modestly priced tertiary care hospital that serves the burgeoning healthcare needs of the community. It provides education and internship/ on the job training to both undergraduate and postgraduate students in the following colleges/schools/institutes in DUHS:

• Dow Institute of Nursing & Midwifery
• Dow College of Pharmacy
• Dow College of Biotechnology
• Dow International Dental College
• Dow International Medical College
• Dow Institute of Medical Technology
• Institute of Business & Health Management
• Dr. Ishrat-ul-Ebad Khan Institute of Oral Health Sciences

It is among the few hospitals in the region that provide services for liver, kidney and bone marrow transplantation. Additionally, it offers complex and advanced medical and surgical care needed for patients in the areas of cardiology, cardiac surgery, neurology, neurosurgery, gynecology & obstetrics, emergency medicine, pediatrics, nephrology, physical medicine & rehabilitation, dermatology and other disciplines.

Service area within Dow University- OJHA campus are:

• Renal Transplant Unit
• Dow University Hospital (DUH)
• Dow Institute of Radiology (DIR)
• Center For Surgical Oncology
• Dr. Abdul Qadeer Khan Institute Of Behavioral Sciences
• National Institute Of Diabetes And Endocrinology (NIDE)

<ul style="list-style-type: none"> • Dow Diagnostic Research & Reference Laboratory (DDRRL)
<ul style="list-style-type: none"> • National Institute Of Liver And Gastrointestinal Diseases With Liver Transplant Unit (NILGID)
<ul style="list-style-type: none"> • Dental Sections, DIMC & DDC (With 10 Units For Oral & Maxillo-Facial Surgical Procedures) & Dental OPD Of DIKIOHS

Pharmacy Services

Pharmacy provides 6 days a week services to its customers. All prescription drugs and over the counter drugs are provided by the IPD & OPD pharmacy to cater to the needs of our patients as well as walk-in patients.

Vaccination Services

Vaccination services are available as provided by the National Expanded Programme of Immunization (EPI) and free of cost at OICD.

Physical Therapy Services

The Department of Physiotherapy provides comprehensive inpatient and outpatient services. All Physiotherapists are here to assess and treat patients of all ages and ailments and provide an important support service for our inpatients and outpatients in need of dire physical therapists.

In-patient Departments- IPD

Surgical	Medical	Pediatrics
E.N.T	Dialysis	Psychiatry
Orthopedic	Gynae / Obs	Ultrasound/ VIR

Critical care Units

EEG	CTG	VEP	EMG / NCV
G.A Fitness	Labor Room	Surgical ICU (06 Bed)	Dialysis lab (Newly built)
Medical ICU (11 Bedded)	Neonatal ICU (06 Incubators)	Operation Theater (04 O.T Tables)	Emergency Department (15 monitored Bed)
Pulmonary Function Test	Sleep Lab (Polysomnography)	Fully equipped 24 hours running ER including separate minor O.T, Ultrasound & X Ray.	

In summary, Dow Hospital provides following services and facilities to their patients:

• Intensive Care Unit (ICU)
• Dialysis Department
• Living donor Liver transplant
• High Dependency Unit (HDU)
• Outpatient Department (OPD Block)
• Neonatal Intensive Care Unit (NICU)
• Hepato-pancreatic biliary surgeries
• 24 hours Emergency Service Department
• 24 hours Emergency Service Department
• Vascular Interventional Radiology (VIR), highly specialized procedure for various diseases minimizing major surgeries
• All types of medical & surgical treatments to cardiac patients
• Operation Theater (OT) Complex for all major & minor surgeries

Dow Diagnostic Research and Reference Laboratory (DDRRL)

Dow Diagnostic Research and Reference Laboratory (DDRRL) was established in October 2007 to provide reliable, high quality diagnostic services of International standards for routine and specialized tests at economical rates (i.e. approximately at 30% as compared to private rates), for all socio economic segments of the population. The laboratory is the fastest growing lab in Pakistan, whose internal quality assurance is guaranteed by daily controls. DDRRL also has the provision of online electronic reporting and Image transfer facilities for all patients.

Radiological Testing Services

The Dow Institute of Radiology and Dow Diagnostic Complex are facilitated with services that include the provision of all modern diagnostic facilities like:

X-rays	Ultrasound	Fluoroscopy
Mammography	Echocardiography	General Radiography
Computed Tomography (CT) Scan	Magnetic Resonance Imaging (MRI)	Dual Energy X-Ray Absorptiometry (DEXA) Scan

Operation Theater (OT) Complex

Dow University Hospital established a huge operation purpose built theater i.e. OT Complex of International standards having 80,000 sq. ft. area which is fully equipped with most modern equipment. The OT Complex has nine 09 operation theaters. Two are designated for Liver Transplant and hepato-pancreatic biliary surgeries while two theaters are designated for Cardiac and Orthopedic Surgeries; the required special instruments and gadgets for the purpose are installed and provided.

The remaining five Theatres are also fully equipped with most modern equipment to have operations of General Surgery, Urology, ENT, Plastic Surgery, Neuro Surgery and Thoracic Surgery, Bariatric Surgery etc. This complex also has a fully equipped recovery room. The operation floor has a unique channelizing operation in automation to collect the dirty liner with safety, which is then washed, sterilized and stored hygienically preventing infection.

The OT complex has state of art equipment including ventilators, invasive hemodynamic monitoring system and hemodialysis. Since various specialties also provide Postgraduate training, camera recording and CCTV system is also installed for telecasting live operative procedures. This new OT complex has a lot of facilities for the doctors, staff and students, including rest rooms, canteens and separate lockers besides other facilities.

Physiotherapy Services Department

Dow University of Health Sciences also offers physiotherapy services to outpatients through the attached department of the School of Physical Therapy at Institute of Physical Medicine & Rehabilitation (IPM&R). This department provides comprehensive rehabilitation services, i.e. cardiac, neurological musculoskeletal and pediatric rehabilitation, currently providing physiotherapy services to more than 55 patients per day. Since its establishment 14000 patients have been provided with physiotherapy services.

Blood Transfusion Services Program

Safe blood is a crucial and irreplaceable component in the medical management of many diseases. In Karachi, because of the massive influx of patients from interior Sindh and other rural countryside, the demand for safe blood for transfusion could not be met with only replacement donors. Blood shortage in Pakistan is documented to be about 40% and this problem is further accelerated by the inappropriate use of blood and its products.

Dow University of Health Sciences has taken the initiative towards provision of safe blood products to the needy patients. The overall project objective is to contribute to lowering hemorrhage mortality and to reduce the risk of transfusion transmitted infectious diseases and provision of safe and efficacious blood and blood products. The Voluntary non-remunerated blood donation (VNRBD) is the ideal source of quality blood, which forms less than 15 % of the blood demand in Pakistan. Under this initiative, Safe Blood

Transfusion Services have been initiated with the strong pillars of voluntary blood donation with considerable community outreach, training of human resource in blood banking and transfusion medicine as per the recent scientific techniques and under the WHO recommended Quality Management principles, developing service delivery in blood banking and transfusion laboratory sciences with continuous education and research in transfusion medicine.

DUHS blood donation services are extremely active under the Donor Management Department of the Centre and disseminating the message of Voluntary Blood Donation to the population at large. The purpose is:

<ul style="list-style-type: none"> ● Creation of a culture of voluntary blood donation through communication and education.
<ul style="list-style-type: none"> ● Build a stable blood donor pool by motivating and recruiting new donors from low-risk populations, and encouraging existing or lapsed donors to become regular donors and to recognize the contribution to society made by blood donors.
<ul style="list-style-type: none"> ● Provide quality donor care, so that blood donation is not onerous
<ul style="list-style-type: none"> ● Provide quality assured blood products to all the needy patients
<ul style="list-style-type: none"> ● And create a sustainable foundation of advanced WHO recommended blood banking in Pakistan.

OJHA Institute of Chest Diseases (OICD) & Chest Disease Clinics

OICD was established in the early forties, as a TB sanatorium and now recognized as a center of excellence for Tuberculosis by the World Health Organization (WHO). The services provided here are free of cost and normally such types of ICU services cost around Rs. 20,000 - Rs. 50,000 / day in private hospitals.

The facilities provided to patients include high quality diet, recreation environment with TV, cable etc. and vocational training and support in the form of training for candle making and stitching etc. The Dow University takes the responsibility to sell their products for them.

Four out-patient clinics of OICD in the periphery of the city are also functioning, these are chest clinics of Iqbal Yad, Nazimabad, Lyari and Malir, Each clinic has a well-organized DOT (Directly Observed Treatment), where these patients with TB are provided medicines and health education.

Daily about 600 patients visit these TB clinics for DOTS treatment and follow up.

TB HOSPITAL of 250 beds provides all possible facilities to indoor and outdoor patients for diagnosis and treatment of tuberculosis.

MULTI DRUG RESISTANT (MDR) TB is a great problem. In Pakistan about 15,000-20,000 tuberculosis patients presently suffering from Multi-Drug Resistant (MDR TB), each patient

requires approx 500,000 Rs. for management including costly medicines and other logistics but at OICD their treatment is free.

15.2. HEALTH INSURANCE FOR DUHS EMPLOYEES

Financial responsibilities are considered as the main source of stress. To reduce the financial burden of its employees; DUHS provides medical insurance coverage to all employees appointed on a Regular basis and to /Contractual basis with at least one year service.

The insurance coverage is currently provided by Askari General Insurance. The details of this health insurance scheme are discussed here as under:

The Employees & their dependents covered are divided in the following categories:

Benefit Structure for Employees and Staff of DUHS

Benefits/ Coverage	Categories and Annual Entitlements in Rs.		
	Plan - A BPS - 19 & 22	Plan - B BPS - 16 & 18	Plan - C BPS - 1 to 15
Hospitalization Limit for Employees & Spouses (each)	1,200,000/-	700,000/-	400,000/-
Hospitalization Limit for Children (each)	750,000/-	350,000/-	200,000/-
Hospitalization Limit for Parents (each)	1,000,000/-	400,000/-	200,000/-
Daily Room / Bed limit per day	37,000/-	9,000/-	6,000/-
Maternity Limit for Normal Delivery & Miscarriage	100,000/-	60,000/-	40,000/-
Maternity Limit for Cesarean Section & Multiple Births	200,000/-	100,000/-	60,000/-
Out-Patient Reimbursement	70,000/-	30,000/-	20,000/-

Eligible Medical Expenses (including but not limited) to be covered from ANNUAL HOSPITALIZATION LIMITS shall include Hospitalization & Day Care Treatment as Follows (For Premium & Dow ASO Pool Policies).

Benefits of Employees Covered under IPD/ Hospitalization

1.	Burns
2.	Stroke/CVA
3.	Surgical fee
4.	Thyroid Dichotomy
5.	Psychiatric Treatments
7.	Diagnostic Investigations
8.	Local Ambulance Charges.
9.	Congenital Birth Defects.
10.	Organ Transplant Implants
11.	Operation Theater Charges
12.	Blood and Oxygen supplies
13.	Daily Room & Board Charges.
14.	ICU/CCU/SCU/HDU charges
15.	Angioplasty/By-Pass Surgery
16.	Maternity related complications.
17.	In-Hospital Consultation Charges
18.	Declared/Undeclared pre-existing conditions
19.	Emergency Room treatment leading to hospitalization
20.	Enhancement of Hospitalization limit in case of Accidental injuries (50% of available limit)
21.	Pre-Post Hospitalization covered including OPD, Diagnostic Tests, Consultation Charges & prescribed Medicines within 30 days prior to or after Hospitalization.
22.	Miscellaneous Hospital Services and Supplies (Drugs, Dressings, Prescribed Medicines, Laboratory Examinations, Physiotherapy, intravenous injections & solutions, administration of blood and blood plasma including cost and any other fluids administered during surgery)
23.	Other Operative procedures

Benefits of Employees Covered Under Maternity

1.	Anesthesia Charges.
2.	Pre & Post Natal Expenses.
3.	Coverage of Congenital Birth Defects.

4.	Circumcision Charges of Newborn Baby Boys.
5.	Midwife Charges if delivery takes place at home.
6.	Operation Theater/Physician's/Surgeon's charges.
7.	Normal/Caesarea/Multiple Births/Force Delivery.
8.	Midwife Charges if delivery takes place at home.
9.	Follow-up visits of patients during or after pregnancy.
10.	Prescribed Medical Supplies & Services during Hospitalization.
11.	Declare/Undeclared Pre-Existing Conditions will be fully covered.
12.	New Born Babies Nursery Care Charges including incubator facility.
13.	Obstetricians Fee for Delivery & Consultation during Hospitalization.
14.	New Born Babies are to be covered from the very 1 st day of Birth with Separate IP limit.

Benefits Covered Under OPD

1.	Vaccinations.
2.	Prescribed Medicine
3.	Psychiatric Treatment
4.	Homeopathic Treatment.
5.	Prescribed Diagnostics Tests
6.	Accident Related Dental Treatment.
7.	Declared / Undeclared Pre-Existing Conditions.
8.	Physician / Consultant's fees for consultations.
9.	Pathology, Radiology and Diagnostic Tests, X-rays & Ultrasounds.
10.	Costs for Treatment by Therapists and Complementary Medicine Practitioners.
11.	Wellness Mammogram, Pap smear, Prostate Cancer Screening or Colon Cancer Screening.
12.	Dental Treatment including Extractions Teeth, Root Canaling or Capping or Similar Treatment.

Day Care Facilities

MRI	CT Scan	Lithotripsy
Angiography	Gastroscopy	Herniorrhaphy
Appendectomy	Cataract Surgery	Thallium Scan
Cholecystectomy	Excision Biopsy	Kidney Dialysis
Partial Mastectomy	Veins/Varicose	Tonsillectomy/Adenoidectomy
Non-Malignant Tumors/Abscess		
Endoscopy/Cystoscopy/Colonoscopy		
Treatment of Cancer (including chemotherapy & Hormonal therapy with pre and post cover)		
Treatment of Hepatitis A B & C such as Inj. Interferon Therapy/Tab. Sovaldi or equivalent along with all combination therapy, consultation & Lab Tests such as PCR/LFT up to Hospitalization Limits.		
Treatment of all injuries/fractures & lacerated wounds (out-patient within 24 hours). Accidental Dental Treatment (Out-Patient within 48 Hours for Pain relief only).		
Other day care procedures that are needed on an emergency basis.		
Other Operative Procedures.		

15.3. COUNSELING FOR STRESS REDUCTION

For Students:

Dow University of Health Sciences, Karachi, has taken the initiative to counsel the University students for their stress reduction by facilitating or providing financial assistance through various Institutions/Organizations. There are various organizations which are not in connection with the University, in such organizations University still facilitates students as a forwarding authority like others. Currently, the University signed an MOU with various philanthropists, to facilitate students as well as channelize the system. Meanwhile, University forwarded applications to the following Institutions with respective assistance/facility.



DUHS Counselling Services for Students

Students-Are you dealing with any of the following?



DUHS has a provision for counselling services offered to our students.

Counselling may offer you:

- Confidential non-judgmental support for your learning needs.
- A safe place to learn to be you
- A response to your learning disabilities or learning issues.
- Help you to navigate change in your life

Email for appointments

Ms. Fouzia Rehman

Student Counsellor Office
located at Ground Floor, Nursing Building
Email: fouzia.rehman@duhs.edu.pk
Ext: 2608

Ms. Areeba Rehman

Student Counsellor
Dow International Medical College,
OJHA Campus
Email: areeba.rehman@duhs.edu.pk



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DUHS

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CHAPTER 16

Sustainability

16.1. GOOD HEALTH & WELL BEING - SDG 03

Global and National Collaborations:

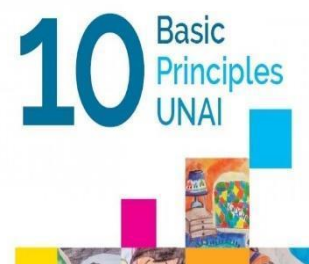
The Dow University of Health Sciences collaborated with different organizations / bodies at local, national and international levels to improve health and wellbeing.

At Global level, DUHS has developed a WHO collaborating Centre at Ojha Institute of Chest

Diseases (OICD)-DUHS for Tuberculosis (TB) Research.

Also, DUHS has acquired United Nation Academic Impact (UNAI) Membership Citation in April 2020, and as a member, values it's commitment to its 10 principles, which include:

1. Commitment to the United Nations Charter,
2. Human Rights,
3. Educational opportunity for all,
4. Sustainability,
5. Capacity-building in higher education systems,
6. Global citizenship,
7. Peace and conflict resolution,
8. Addressing poverty,
9. Higher Education opportunity for every interested individual
10. The “unlearning” of intolerance.



Community Outreach Programs:

- **Department of Community Medicine, Dow Medical College (DMC)**

The Department of Community Medicine, DMC organized various outreach and awareness sessions for the community. Below is the event calendar hosted by the Community Medicine Department during 2021-2022.

S. No	Event/ Course	Date	Venue	Facilitator/s
1.	Seminar on COVID19 Health promotion and prevention.	9 th July, 2021	Arag Auditorium	Prof. Nighat Nisar, DR. Zulfiqar, Dr. Ashraf, Dr. Maham, Dr. Khalid
2.	Community awareness session on GTV child	12 th Sept, 2021	GTV	Dr. Khalid Shafi

	immunization against covid-19			
3.	Community awareness Webinar on Child Immunization	28 th June 2021	Hashmanis Hospital	Dr. Khalid Shafi
4.	Effects of smoking on Community	4 April 2021	School of Public Health	Prof.Nighat Nisar, Dr. Khalid Shafi,Dr. Hasia Maham, Dr. Gati Ara
5.	Water Conversation	29 th September, 2021	4 th Floor PDC, DMC.	Prof.Nighat Nisar, Dr. Khalid Shafi,Dr. Gati Ara
6.	Polio Advocacy	July, 2021	UC no 5. Khi.	Dr.Khalid Shafi
7.	Baby-Friendly Hospital Initiative	12 th February 2022	4 th Floor PDC, DMC	Prof.Nighat Nisar, Dr. Khalid Shafi,Dr. Hasia Maham, Dr. Gati Ara
8.	Baby-Friendly Hospital Initiative	16 th February 2022	Civil Hospital Khi.	Dr. Khalid Shafi
9.	26 Feb 2022 biennial conference gynae.	26 Feb 2022	P.C hotel	Dr. Khalid Shafi
10.	Green Youth Movement With Captain	August 2022	Arag Auditorium	Dr. Ashraf Jahangeer
11.	International APCP conference 10 to	10 th to 13 th March,2022	At PC Hotel. Lahore.	Dr. Khalid Shafi
12.	Baby-Friendly Hospital Initiative	11 th May 2022	NLH-1 at Dow	Dr. Khalid Dr,Hasina Maham Dr.Gati Ara
13.	Baby-Friendly Hospital Initiative	12 th May,2022	NLH-2 at Dow	Dr. Khalid Dr,Hasina Maham Dr.Gati Ara



HASHMANIS GROUP OF HOSPITALS

CHILDHOOD IMMUNIZATION

PROTECT YOUR CHILDREN



SPEAKER

DR. KHALID SHAFI
MBBS, DCH, MCPS, MPH, FCPS
Secretary General
Pakistan Pediatric Association
Associate Prof Dow University
of Health Sciences

28TH JUNE - 2021
DAY: MONDAY
TIME: 11: 00 AM



MODERATOR

DR. SYEDA SADAF AKBER
MSC, PHD
HASHMANIS GROUP OF HOSPITAL

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- **Department of Community Dentistry, Dow International Medical College (DIMC)**

The department of Community Medicine has been involved in various community based activities along with DIMC students in coordination with several local NGOs.

S #	Activity	Date	Details	Faculty involved
1.	Breast Cancer Awareness Campaign	6 th October, 2021	An awareness Seminar including free screening through physical examination was conducted among the community women visiting DUHS for various health related services.	Dr. Munazza along with CARE
2.	Participation with Green Youth Movement, DUHS	March, 12, 2022	Awareness raising and participation in plantation activities	Dr. Munazza
3.	Children with Disability Day –Dar –UI -Sukoon	5 th March, 2022	The day was celebrated with disable children at the facility along with members from Care NGO. Goodies and gifts were distributed by the Care NGO.	Dr. Vinod Kumar
4.	Heat stroke awareness campaign	26 th May, 2022	An activity was organized to raise awareness regarding heat stroke and to guide the community about the ways to avoid heat stroke in the hot weather of Karachi.	Dr. Munaza
5.	Visit at old home in Karachi –Dar-ul-Sukoon	4 th June, 2022	A planned visit was conducted at an old home located at Numaish Chowrangi, Karachi to organize playful and healthy activities for the old home residents. They were also provided with food and funds with the courtesy of medical students working with “Care” NGO. 120 Senior citizens were targeted through this activity.	Dr. Sana
6.	Blood Donation Day Drive by DIMC Students	14 th June, 2022	Students of DIMC along with members of Care NGO organized a drive.	Dr. Sana



- **Department of Community Dentistry, Dow International Dental College (DIDC)**

The Department of Community Dentistry, DIDC arranged free dental screening and oral hygiene awareness camps to provide quality health services for the benefit of General public. The details of community based projects done by the Department of Community Dentistry, DIDC are provided below.

S #	Project Name	Participants / Population	Project calendar	Project Area / Location
1.	Baby Mama School	340	June 2022	Banori Town, Gurumandar
2.	Muhammadi Girls School	75	May 2022	Malir
3.	Ali Boys School Dental Camp	150	April 2022	Malir
4.	Rangers 53 Dental Camp	200	March 2022	Punjab Colony
5.	Long Khoso Village Matyari	150	March 2022	Matyari
6.	Rangers 63 Dental Camp-Lyari	300	November 2021	Barrister Zulfiqar Law College- Lyari
7.	Rangers 53 Dental Camp-Qayyumabad	210	October 2021	Raahat Islamia Govt. School-Qayyumabad
8.	Pakistan Youth forum welfare Trust -Dental camp	100	October 2021	Aghaaz School- Lemo Goth
9.	Rangers 53 Dental Camp-Qayyumabad	276	July 2021	Raahat Islamia Govt. School -Qayyumabad
10.	Rangers 63 Dental Camp-Lyari	306	July 2021	Barrister Zulfiqar Law College- Lyari



List of Community Outreach Programs at DUHS

S. #	Event/ Course	Date	Venue	Facilitator/s
1.	Awareness session on "Monkeypox"	14th June, 2022.	Dow Medical College	Volunteer Force against Hepatitis Transmission
2.	Awareness session on "Colorectal Cancer Day"	29th May, 2022	DMC Campus	Medical Unit, DMC
3.	Seminar on COVID-19 End of Pandemic	29th March, 2022	ARAG Auditorium, DMC Campus	Dow University of Health Sciences and Infection Control Society Pakistan
4.	One Day Hands-on Workshop on Basic Surgical Skills	19th March, 2022	Dow International Dental College and Hospital. DUHS	Dr. Narender Dr. Raheel Dr. Lubna Dr. Hasaan Department of Oral & Maxillofacial Surgery, DIDC, DUHS
5.	Awareness Session on Diabetes and Ramadan	7th March, 2022	National Institute of Diabetes and Endocrinology, DUHS	Dr. Zareen Kiran Consultant Endocrinologist
6.	Webinar on Rabies Awareness	27th February, 2022	Online Webinar	Dr. Muhammad Ubaid, Medicine & Dr. Sara Haider Director HEalth Wing by Adal aur Sehat
7.	Voluntary Blood Donation Camp by Patients' Welfare Association	23rd & 24th February, 2022	Dow Medical College, DUHS	DMC Campus, DUHS
8.	Gastrocon Conference	February. 2022	Dow Medical College, DUHS	DMC Campus, DUHS
9.	Awareness session on "Hepatitis History taking" workshop	22nd November 2021	Dow Medical College	Volunteer Force Against Hepatitis Transmission
10.	Session on Child Labour is a Crime	15th November, 2021	Dow Institute of Nursing and Midwifery	Dow Institute of Nursing & Midwifery, DUHS
11.	World Mental Health Day	11th November, 2021	BS Nutrition, School of Public Health	School of Public Health, DUHS

12.	World Diabetes Day 2021	12th November, 2021	National Institute of Diabetes Endocrinology, DUHS	DUHS
13.	(Green Youth Movement) GYM Club Orientation Session; Cleaning Drive-01	09th November, 2021	Institute of Business & Health Management	Ms Yasmeen, IBHM DUHS
14.	Pre Conference Workshop on Respiratory Care 2021	26th October, 2021	Dow Institute of Medical Technology, DUHS Ojha Campus	Respiratory and Critical Care Technology (DIMIT)
15.	Respiratory Care Conference 2021 (Resilience, Strength, Hope)	27th October, 2021	A.Q Khan Auditorium DIMC, DUHS	Respiratory and Critical Care Technology (DIMIT)
16.	Breast Cancer Awareness Walk & Seminar	26th October, 2021	Dow Institute Medical College, Dow University Hospital, DUHS Ojha Campus	Dow Institute Medical College, Dow University Hospital
17.	Breast Cancer Awareness Drive 2021	23rd October, 2021	DMC Campus	Prof. Farhat Jaleel
18.	American Society for Microbiology (ASM) Webinar Series; COVID-19 and Mental Health	20th October, 2021	Online Webinar	Prof. Dr. Saeed Khan, Dr. Washdev Amar,
19.	American Society for Microbiology (ASM) Webinar Series; Oral Health and Dental Education during COVID Pandemic: Challenges & Way forward for Pakistan	13th October, 2021	Online Webinar	Prof. Dr. Saeed Khan, ASM Ambassador to Pakistan. Prof. Shahjahan Katpar DDC, DUHS
20.	Seminar on Mental Health in an Unequal World	13th October, 2021	A.Q Khan Centre, IBS/DUHS	Institute of Behavioral Sciences, A.Q.Khan Centre, DUHS
21.	Awareness Seminar on Tobacco Control	12th October, 2021	Arag Auditorium, DMC	Department of Community Medicine, DMC
22.	Interactive session on Water Conservation	29th September, 2021	PDC, DMC Campus	Department of Community Medicine, DMC
23.	World Oral Health Day; Oral Health Awareness Walk		DUHS Ojha Campus	Dr Ishrat-ul-Ebad Khan Institute of Oral

				HEalth Sciences, DUHS
24.	Plasma Donation Campaign		Online Webinar	DUHS

Smoke-free Campus

Dow University of Health Sciences has the Policy for Tobacco & Smoke Free Environment at DUHS which was created on April 11, 2020 and publicly available on DUHS website. The department of Community Medicine, Dow Medical College – DUHS organized an awareness session for all the staff and students on Smoking and Tobacco Control & Cessation, to encourage a smoke free environment. Moreover, The Marketing department of DUHS organized an anti-smoking team visit by Commissioner Karachi & WHO Representative on 16th June, 2022, in which DUHS was declared as Pakistan First Smoke-Free University.



16.2. QUALITY EDUCATION – SDG 04

Educational Outreach Activities

S. #	Event/Course	Date	Hosted by
1.	Endoscopic Hands-on Cadaveric Workshop on Skull /base Surgeries in Collaboration with World Federation of Neurosurgical Societies (WFNS) and Pakistan Society of Neurosurgeons (PSNS)	May. 2022	DMC Campus, DUHS
2.	Workshop on “Digital Markets What do they have for You”	1st April, 2022	Dow University Business Incubation Center, Ojha Campus.
3.	Exhibition and Competition of 3D-Models of Structural Biology of Viruses	1st April, 2022	Dow Research Institute of Biotechnology and Biomedical Sciences (extension), Dow Diagnostic and Research Complex, DUHS
4.	CME Workshop on “Effective Time Management of Tools and Tricks”	29th March, 2022	Professional Development Centre, DMC Campus
5.	Seminar on Bovine Lumpy Disease: “Current Status and Way forward to Therapy and Prevention”	25th March, 2022	Dow College of Biotechnology, DUHS
6.	Live Webinar “AWARE on Management of Pneumonia and Rising threat of AMR in recent times”	21st March, 2022	GSK and Medical Microbiology & Infectious Diseases Society of Pakistan; (Speaker: Dr. Azizullah Khan Dhilloo Assistant Professor, DMC)
7.	Inauguration Ceremony cum Scientific Meeting & Workshop	3rd March, 2022	Karachi University & Association of Molecular & Microbial Sciences (Invited Speaker: Prof. Mushtaq Hussain Principal, DCOB, DUHS & visiting Professor Health Science Division, Loyola University Chicago, USA)
8.	DUHS Career Fair 2022	2nd & 3rd March, 2022	DUHS Ojha Campus
9.	Master Trainer Workshop on “Baby Friendly Hospital Initiative (BFHI)”	23rd- 25th February, 2022	DMC Campus, DUHS
10.	International Conference on “Sustainable Development Goals”	21st to 23rd December, 2021	Office of Research Innovation & Commercialization, DUHS Ojha Campus.
11.	Workshop on “Qualitative Research Methods”	14th November, 2021	Office of Research Innovation &

			Commercialization, DUHS Ojha Campus.
12.	Hands-on Workshop on “Scientific Manuscript Writing (for Impact Factor Journals)”	06th to 27th November, 2021	Prof. Kashif Shafique, Office of Research, Innovation & Commercialization, DUHS
13.	Hands-on Workshop on “IBM SPSS”	6th to 20th November, 2021	Office of Research Innovation & Commercialization, DUHS Ojha Campus.
14.	Workshop on “Study Designs”	05th November, 2021	Office of Research, Innovation & Commercialization, DUHS
15.	3rd Cochlear Implant Workshop	3rd November, 2021	ENT- Head & Neck Surgery, DIMC
16.	Seminar on “WHO Intrapartum Labor Care Guide Next Generation Partograph and Respectful Maternity Care”	28th October, 2021	Dow Institute of Nursing & Midwifery, DUHS Ojha Campus
17.	Seminar on “Multidisciplinary Approach to Thyroid Gland Diseases”	27th October, 2021	Professional Development Centre, DUHS
18.	Breast Cancer Awareness Walk & Seminar	26th October, 2021	Dow International Medical College, DUHS Ojha Campus
19.	1st Online Crash Course of Diabetes and Endocrinology for Endocrine Fellows	24th October, 2021	National Institute of Diabetes and Endocrinology, DUHS
20.	Inauguration of New Medical Physics Lab at DIPM&R	September, 2021	Dow Institute of Physical Medicine & Rehabilitation, DUHS
21.	Hands-on Workshop on Advanced Minimally Invasive Surgical Approaches to Spine with collaboration of Pakistan Society of Neurosurgeons (PSN)	July. 2021	DMC
22.	COVID-19: A Focus on Methylprednisolone, LMWH and Ivermectin	17th April, 2021	Online Webinar by The Impact Team UK

Executive Training or Vocational Training Programs

DUHS provides a platform for health care professionals by signing an agreement with Pakistan Institute of Quality. An executive education program which is Certified **Healthcare Quality Professionals**, and is open to all, not just those from the University. This program equips professionals to be certified as a Healthcare quality professional and the 4 months course provides lectures and interactive discussion sessions, each semester, open specifically to personnel working in health services or healthcare management.

Moreover, Dow University of Health Sciences has a separate department for training with the name of **Dow Skills Development Centre (DSDC)**. It is registered/ affiliated with Sindh Board of Technical Education Karachi and National Vocational & Technical Training Commission (NAVTTTC), and conducts Professional Computer Courses as well as regular vocational training for faculty/ staff. The program particularly focuses on key technical skill areas identified as the most crucial for Health Care Professionals at DUHS to improve the level of services DUHS is providing to the nation. However, there are specialized textile sector courses for girls in a safe & secure environment.



DOW UNIVERSITY OF HEALTH SCIENCES

The DOW SKILL DEVELOPMENT CENTRE (DSDC)
is now accepting admissions from September 1 to 30th 2022 for the following Government Certified courses:

CERTIFICATE IN INFORMATION TECHNOLOGY

(6 months)

MS-OFFICE ESSENTIALS

(3 months)

ENROLL NOW!

Last Date to apply: **30th September 2022** Classes Start from: **4th October 2022**

FEES:	
CIT BATCH 4:	MS-OFFICE:
ONE TIME COURSE FEE: RS. 4,800 payable at time of admission	ONE TIME COURSE FEE: RS. 3,600 payable at time of admission
BOARD EXAMINATION FEE: RS. 3,500 payable at the end of 3rd month	BOARD EXAMINATION FEE: RS. 3,500 payable at the end of 3rd month

For Admissions and Further Information Please Visit:
DOW SKILL DEVELOPMENT CENTRE (DSDC)

1st Floor, Digital Library,
Dow University of Health Sciences,
Ojha Campus, Gulraze-Hijri,
Suparco Road, Scheme-33, Karachi

021-38771111 EXT 4331

dvte@duhs.edu.pk

www.duhs.edu.pk/institutes/dvte



DOW UNIVERSITY OF HEALTH SCIENCES
DOW SKILLS DEVELOPMENT CENTRE

Dow Textiles Learning Factory for Disadvantaged Women and Young Girls

ABOUT THE PROJECT:
A learning factory represents a simulation of a real factory environment where students can gain hands on training in a skill by conducting various industry led projects, while also earning an income.

INVITATION FOR COLLABORATION

Why Should You Support This Venture?

The DSDC Stitching Unit was a running programme until the pandemic had to divert funding leaving hundreds of candidates stranded without any access to quality training.

Training in the tailoring trade has led to many women to become self sufficient, while also being able to support their families.

Total Funds Requested (donation/grant) : PKR 2,187,000

WEB:
<https://www.duhs.edu.pk/new/dow-vocational-training-centre-introduction>
www.facebook.com/DOWVocationalAndTechnicalTrainingCentre

ADDRESS:
1st Floor, DPMC Central Library Building,
DUHS Ojha Campus, Suparco Road Off
University Road, Karachi, Pakistan.

farhankhan@duhs.edu.pk

0324-2940291

021-38777111
Ext. 4331

16.3. GENDER EQUALITY - SDG-05

The Dow University of Health Sciences practices equal access to resources and opportunities, regardless of gender, including employment, admission and decision-making.

Women Applications and Entry

The scope of non-discrimination with regards to gender on admission of students is covered in the **DUHS Act 2004** (policy document of the University) which states in Clause No. 5.1 Under Section that the University is Open to All, ***“The University shall be open to all persons of either sex of whatever religion, race, creed, color who are academically qualified for admissions to the courses of study offered by the university and no such persona shall be denied to the privilege on the ground of only sex, religion, creed, race, class, color”.***

Furthermore, **DUHS demonstrates equal employment opportunity** without any discrimination to genders and encourages a participative work culture of equality and professionalism in all the endeavors at DUHS. These aspects include, hiring, learning, development, performance enhancement etc.

Women's Access Schemes

Mentoring programs are being offered at constituent Institutes/ Colleges/ Schools at DUHS such as DCOP & DIPM&R. Furthermore, DUHS also have scholarship programs in which different scholarships are awarded to students and Ehsaas Undergraduate Scholarship Program is one of them. It is the country's largest undergraduate scholarship program provided by the Higher Education Commission (HEC) -Pakistan, in which students are given need and merit-based scholarships, with 50% scholarships reserved for girls.

Maternity Policy

At DUHS, the maternity policy is in place from 2007 as mentioned in the Statutes of DUHS, Maternity Leave Clause No. 11 of the Section, Leaves Statues of DOW University Statues 2007, which are translations of the Act (policy document for every university). However, the formal policy was created in 2019. As a semi-autonomous organization, we follow all Sindh government rules and regulations, which has granted paternity leave to employees as allowed through the Gazette of Pakistan 2019.

Childcare facilities for students, staff and faculty

Dow University of Health Sciences has Dow Day Care Center which offers a subsidized day care facility to the students, staff and faculty which allow them to continue their studies and ensure work compliance of all the employees. The Day Care provides child care services to infants of age 3 months to 5 years. It maintains a good hygienic environment by following standard child care practices under supervision of trained professionals. It also promotes early childhood development by providing facilities and engaging children in physical and interesting age-appropriate learning activities, day celebrations and by providing best hygiene, furniture equipment, meal, snack time, play time & sleeping time. The details can be found at provided web links of Day Care Centers at both campuses of DUHS.



DUHS has formal policy in place for the protection against discrimination, for instance Policy for Grievance of Students & Policy for Grievances of Employee. Besides the formal policy for the said purpose, we also have various forums/ mechanisms in place which deal with and allow reporting of cases regarding such discriminations. "Dow Connect" (<http://dc.duhs.edu.pk/>) is the confidential e-portal for registering complaints/requests of faculty, staff & students regarding discrimination from educational or employment disadvantage. The students can also register their educational matters/complaints to the Academic Committee of DUHS, which meets as and when required and furnishes its recommendations/suggestions to the competent authority for approval. Also, the faculty and staff can put up their concerns in the "Grievance Committee", which resolves the cases accordingly.

16.4. PARTNERSHIP FOR THE GOALS – SDG 17

Collaboration with NGOs to tackle the SDGs

Dow University of Health Sciences has its own student run non-profit, non-political welfare organizations i.e. Pakistan Welfare Association (PWA), Dow Patient Care Association (DPCA), & Serve Our Community Health (SOCH).

PWA was established to help those in need, to remove the despair and unease from the lives of those patients who are struggling with poverty. Some activities by PWA for the year 2021-22 are as follows:

- AJM pharma celebrated Thalassemia Day with Thalassemia services of PWA and arranged a small celebratory activity in Thalassemia Day-Care Centre Hall 2.
- PWA held an awareness session 'Tackling Thalassemia' for the students and faculty of Dow Medical College in the Muin Auditorium on 18th May 2022 pm. The session included a panel discussion with esteemed hematologists Dr. Saqib Hussain Ansari, General Secretary of Omair Sana Foundation and Dr. Samra Waheed, consultant hematologist at Patients' Welfare Association who answered queries related to Thalassemia necessary for building adequate awareness. As a public service effort, Essa laboratory sponsored free HB Electrophoresis testing for the attendees so they may know if they are Thalassemia minor and can take adequate measures in the future. Gracing the event was a parent of our Thalassemia patient, Abdul Hadi who shared her story of providing Thalassemia management for Abdul Hadi and about her experience at PWA.
- June 2022, Out of hospital cardiac arrest, training sessions were conducted for volunteers of PWA to ensure improved efficiency of volunteers in the field, and they are ready to serve whenever needed.
- In collaboration with Saaya, Mental health awareness session was conducted for parents and gift distribution for patients on 28th June 2022,



PATIENTS' WELFARE ASSOCIATION®
A NON-GOVERNMENTAL, NON-POLITICAL, DMC STUDENT-RUN ORGANIZATION

اُمیدیں آپ سے وابستہ
بے حساب

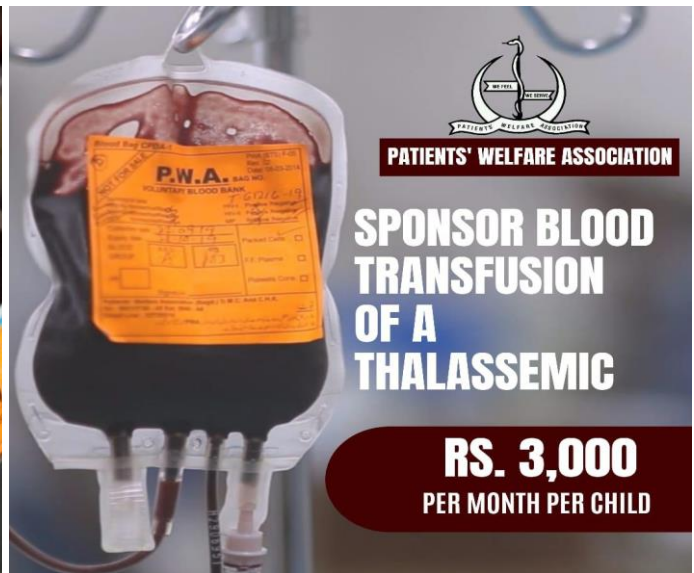
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DPCA, or Dow Patient Care Association, was founded in 2012 and is a resident non-profit, non-political welfare organization that aims to bridge the gap between needy patients and healthcare.

In addition to their focus on addressing patient financial needs, DPCA regularly participates in community awareness initiatives and public health movements to improve the quality of life on Ojha Campus and the surrounding area.

- **Breast Cancer Awareness Day Bake Sale (September 6th, 2021)**
A sale of baked goods in order to fundraise in honor of breast cancer awareness day with literature to educate regarding this condition for visiting students.
- **Stress and Anxiety Workshop with Dr. Anil Wadhawani (Oct 16th, 2021)**
A workshop in which our dear professor, psychiatrist Dr. Anil Wadhawani led a workshop for students on how to define and manage stress.
- **World Diabetes Day (November 12th, 2021)**
A collaboration of DPCA with the Diabetes and Endocrinology department (Dr. Akhtar Ali Baloch) on Ojha Campus, where a large event was hosted to educate the public of the dangers of untreated diabetes and a march was conducted in support of early diagnosis and management.

- Heat Stroke Awareness (May 26th, 2022)

The distribution of 1,000 ice-cold water bottles with educational literature was disseminated in front of the OPD of Ojha Campus as a result of the facilitation by Dr. Iftekhar and supporting faculty.

- DPCA Blood Drive (June 14th, 2022)

Over 70 blood donors were received for blood donation.



Serve Our Community Health (SOCH) is a non-profit, non-governmental welfare organization run by the students of Dow Medical College, and it's working for the betterment of Dr. Ruth Pfau Civil Hospital, Karachi and the promotion of community health. Their aim is to upgrade the infrastructure and maintenance of proper hygiene conditions of Civil Hospital Karachi.

In March 2021, SOCH had the honor of forming a partnership with Koochi Goth Women's Hospital. A 2-day Surgical Camp conducted by Koochi Goth Hospital on the 23rd and 24th of March, 2021. This surgical camp enabled their members to not only observe and learn valuable clinical skills but also allowed them to practice these skills hands-on.



Activities by **SOCH** for the year 2021-2022

- Free Medical and Dental Camp at Idara Al Khair Campus 1 (19th March 2022)
- Colorectal Cancer Awareness Walk (27th March 2022)
- Blood Donation Awareness Campaign at CHK (10th March 2022)
- Epilepsy Awareness Campaign at CHK (16th February 2022)
- Midwives Teaching Session (13th November 2021)
- SOCH Leaders Ambassador Programme (7th November 2021)
- Breast Cancer Awareness Session at Habib University (26th October 2021)
- Free Medical Camp and Health Awareness Campaigns at Baldia Town (10th October 2021)
- Students Learning Project 2021 (25th to 29th August 2021)



List of DUHS Events Collaborations with NGOs and other Organizations

S. #	Event/Course	Date	Collaborations with
1.	Endoscopic Hands-on Cadaveric Workshop on Skull /base Surgeries	May, 2022	World Federation of Neurosurgical Societies (WFNS) and Pakistan Society of Neurosurgeons (PSNS)
2.	Dow University of Health Sciences Career Fair 2022	2nd & 3rd March, 2022	NabiQasim Industries (Pvt.) Ltd. AGP Limited DR Education Consulting PharmEvo Pvt. Ltd. DVAGO Pharmacy & Wellness Experts Bios Co. 1 stall (TA) ABN Overseas Education Pvt. Ltd. Amarant Pharma AusPak International Education Consultant Berlitz – Language Learning Institute Bosch Pharmaceuticals Pvt. Ltd. British Council CATCOS Pvt. Ltd. Creek Hospital Pharmacy Services D' Educationist Dawae.pk Ehad Healthcare Pvt. Ltd. Hilton Pharma Pvt. Ltd. HR Consultants Humwell Pvt. Ltd. Kair Pharma Nutraceuticals Pvt. Ltd. Pakistan American Cultural Center (PACC) SAMI Pharmaceuticals Pvt. Ltd. Shine Humanity Sigma Pharma Sindh Integrated Emergency and Health Services Subcontinent Education Consultant Success Factor Times consultant Yousuf ELT.
3.	Webinar on Rabies Awareness	27th February, 2022	Health Wing by Adal Aur Sehat

4.	Seminar on “COVID-19: End of Pandemic”	29th March, 2022	Infection Control Society of Pakistan
5.	Seminar on Bovine Lumpy Disease: “Current Status and Way forward to Therapy and Prevention”	25th March, 2022	Association of Molecular & Microbial Sciences (AMMS)
6.	World Oral Health Day; Oral Health Awareness Walk		FDI World Dental Federation, Institute of Advanced Clinical Sciences & Research, OICD International College of Dentists, Dental Hygienist Association Karachi (DHAK) & Dental Tribune Pakistan (dti)
7.	Seminar on “WHO Intrapartum Labor Care Guide Next Generation Partograph and Respectful Maternity Care”	28th October, 2021	Midwifery Association of Pakistan (MAP)
8.	Breast Cancer Awareness Walk & Seminar	26th October, 2021	ROCHE Martin Dow The Nation Nawa-e-Waqt
9.	Breast Cancer Awareness Drive 2021	23rd October, 2021	Pink Ribbon SOCH The Nation Nawa-e-Waqt
10.	DUHS Launches E-Coordinator for Healthy Aging Care	October. 2021	EDUCAST
11.	Hands-on Workshop on Advanced Minimally Invasive Surgical Approaches to Spine	July. 2021	Pakistan Society of Neurosurgeons (PSN)
12.	COVID-19: A Focus on Methylprednisolone, LMWH and Ivermectin	17th April, 2021	Online Webinar by The Impact Team UK

Dedicated Courses That Address Sustainability and the Unsustainable Development Goals

Apart from a commitment to meaningful education through all programs around the SDGs across the University, Dow University of Health Sciences also offers dedicated courses (full degrees and electives) that address sustainability and the SDGs. In this regard, Fundamentals of Public Health, Environmental Occupational Health, Reproductive Health & MCH, Community and Preventive Dentistry, Biomechanics and ergonomics, International Relations and Current Affairs, Environmental Sciences, Sociology, Development Economics, Legal & Regulatory Environment for Business and Health Policy Economics etc. are some courses which are offered in BS Nutrition, MS in Public Health, Bachelor of Business Administration, Bachelor of Dental Surgery and Doctor of Physical Therapy.

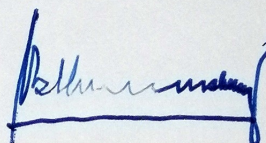
ENDORSEMENT OF THE ANNUAL STANDARDIZED REPORT 2021-2022

Prepared by:

Sanam Soomro

Ms. Sanam Soomro
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Quality Enhancement Cell
Dow University of Health Sciences

Approved by:



Prof. Dr. Mohammed Saeed Quraishy
Vice Chancellor,
Dow University of Health Sciences