



**NUMS**  
NATIONAL UNIVERSITY  
OF MEDICAL SCIENCES



INDUS UNIVERSITY OF  
HEALTH SCIENCES



**Prospectus 2024**

## **Indus Hospital & Health Network**

Indus College of Medical Technology &  
Allied Health

Associate Degree in Blood Transfusion  
Medicine (AD-BTM)

Affiliated with National University of  
Medical Sciences (NUMS)

Empowering Career in Blood Transfusion Medicine through  
An Institute accredited by the Association for the  
Advancement in Blood & Biotherapies (AABB), USA

(Recognized by Times World Ranking 2024)

*Catalyst for Change in Blood  
Transfusion Medicine*

# TABLE OF CONTENTS

---

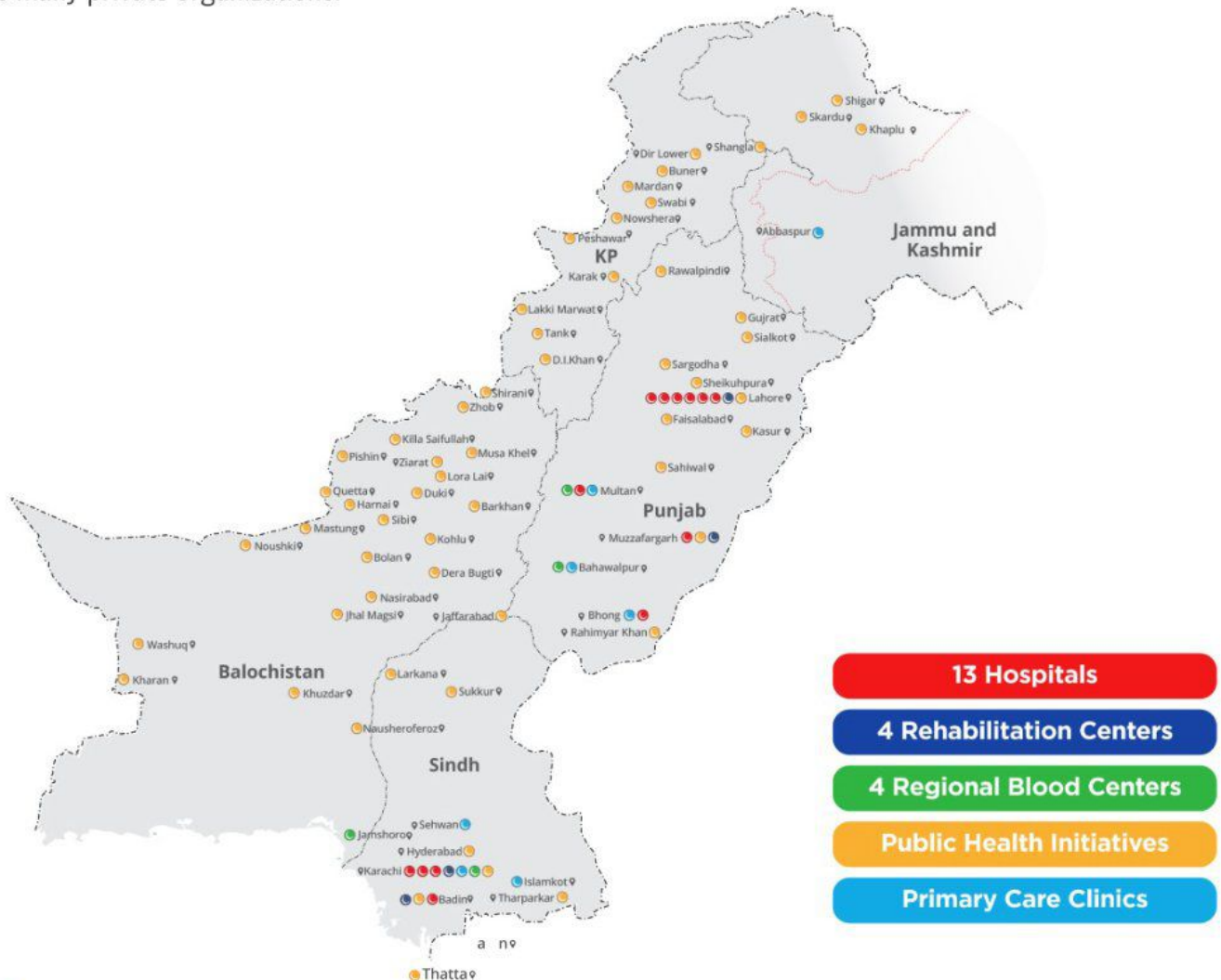
About the Indus Hospital & Health Network	03
About Blood Transfusion Services	04
Vision and Mission of Associate Degree in Blood Transfusion Medicine	05
Message from Dean, Medical Health Sciences and Sr. Executive Director, IHHN	06
Message from Chair, Pathology and Blood Transfusion Services, IHHN	07
About the Program	08
Affiliation and Degree Awarding Institute	10
Academic Program	11
Facilities at Campuses	13
Admission Policy	15
Academic Supervision of Students	17
Arrangements for Quality Assurance	19
Contact Us	20

# ABOUT THE INDUS HOSPITAL & HEALTH NETWORK

The Indus Hospital & Health Network (IHHN) provides quality healthcare absolutely free to millions of deserving patients through its countrywide network of hospitals in Pakistan. Starting with only one hospital, The Indus Hospital, Korangi Campus in Karachi in 2007, IHHN is now managing multiple tertiary and secondary care Hospitals, Physical Rehabilitation Centers, Regional Blood Centers, Community Health Centers and public health initiatives across Pakistan.

It has been the subject of case studies in healthcare delivery, and one in particular, by the Harvard Medical School published in April 2012. The impact of the achievement by IHHN in the short span of a few years is commended in the book by the Council on Foreign Relations Daniel Markey.

Intending to reshape and enhance healthcare across Pakistan, IHHN addresses the broader health problems of the populace. The Network has partnered with the provincial and federal government as well as many private organizations.

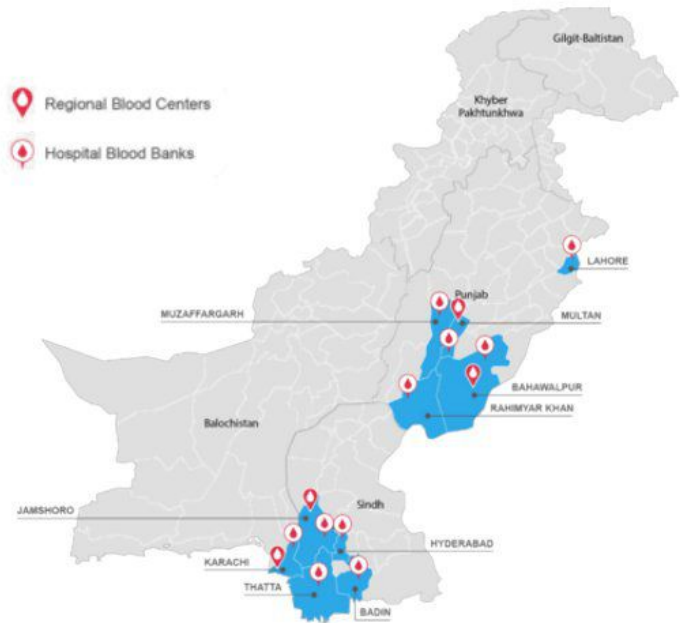


# ABOUT BLOOD TRANSFUSION SERVICES

Pakistan has a broken blood transfusion system, which is demand-driven, fragmented and unregulated. Access to blood in most areas of Pakistan is poor, with the ensuing blood shortage enriching rampant blood mafias. A hepatitis infection rate of 7-10% is making an epidemic inevitable without intervention. This imminent crisis has been addressed by the Indus Hospital & Health Network through the implementation of the centralized blood banking system in the Indus Hospital Blood Center and also in the public sector under the public-private partnership with the Governments of Punjab and Sindh. By operating 3 Regional Blood Centers (RBCs) in Multan, Bahawalpur and Jamshoro, 14 connected hospital blood banks are collecting 195,000 blood donors annually. The network includes teaching hospital blood banks, Nishter Hospital, Bahawal Victoria Hospital, Liaquat University of Medical and Health Sciences Hospital, Civil Hospital Hyderabad, DHQ and THQ level hospitals, totalling 6,500 patient beds which are providing blood transfusion services.

International blood banking guidelines have been implemented across all sites from blood donor selection, collection, component production, transfusion-transmitted infection testing, unit quarantine, verification and issue, serologic testing and quality assurance. In contrast to the practices in Pakistan, the cold chain of blood bags is maintained stringently from collection to delivery. The ready units are not given to the patient's family, rather, these

units are carried by trained blood distributors in cold chain boxes to the bedside with written receipts by the doctors. All four sites are identical state-of-the-art facilities which are ensuring the availability of safe blood of international quality to the most deprived population of Pakistan.





## ASSOCIATE DEGREE IN BLOOD TRANSFUSION MEDICINE

---



### VISION

Enable provision of the safest possible blood, meeting international standards to all segments of the society, without any discrimination, by imparting highest quality of education and training.



### MISSION

Provide educated, well-trained and skilled technologists in blood transfusion medicine in rural, semi-rural and urban Pakistan.

# MESSAGE FROM DR ZAFAR ZAIDI

DEAN, INDUS UNIVERSITY OF HEALTH SCIENCES  
SENIOR EXECUTIVE DIRECTOR, INDUS HOSPITAL & HEALTH NETWORK



Congratulations! Welcome AD-BTM students to be a part of a globally competitive degree in blood transfusion medicine at Indus College of Medical Technology & Allied Health (ICMTAH) campus educating the future generation for competent, compassionate healthcare providers, and providing frontline patient care.

To benefit from the 21st century's boundless economy, a country has to maximize human capital to ensure growth and progress. To make most of this, we require technologically advanced and innovative healthcare services and system. To fulfil the needs of the national and global job-market of the healthcare system, IHHN, in association with NUMS, aims to play a pivotal role in developing a knowledge-based economy that could invest in its youth and facilitate a holistic healthcare system. At ICMTAH, students receive career-focused and skill-based education in an intellectually-competitive, technologically-advanced and socially-inclusive, stimulating learning environment, not limited to classroom teaching and learning practices, as health and allied health professionals play a vital role in patient care and health management information.

Aiming to promote a holistic healthcare system, widening medical education into Allied Health Sciences has become inevitable. AD-BTM is a step to improve existing knowledge and practices in medical and allied life sciences. The opportunities seem infinite as the scope of medicinal practices and the need for healthcare practitioners continuously expand.

DR ZAFAR ZAIDI

A handwritten signature in black ink, appearing to read 'S. Zafar Zaidi', with a stylized flourish at the end.

# MESSAGE FROM CHAIR, PATHOLOGY AND BLOOD TRANSFUSION SERVICES



In a short span of 10 years, the implementation of 'Safe Blood Transfusion Program' through the Pakistan-German Government partnership has brought blood transfusion medicine to the forefront, making blood safety a core priority within the health sector. Fully equipped large regional blood centers and hospital blood banks have been established, along with the revamping of the existing blood banks. These reforms have resulted in a high demand for skilled and educated medical technologists in the field of blood transfusion medicine.

Responding to the market need, the first of its kind 'Associate Degree in Blood Transfusion Medicine' program is being launched by Indus Hospital & Health Network in affiliation with the National University of Medical Sciences, simultaneously in Karachi, Jamshoro, Multan and Bahawalpur. The curriculum has been developed with an applied and focused approach, in close consultation with experts drawn from blood banking and hematology, providing both the solid general education background as well as developing specialized knowledge and skills essential for blood bank technologists.

The rapidly increasing demand for proficient blood bank technologists will ensure the marketability and employability of the graduates. This program aspires to produce the next generation of blood banking workforce, addressing the local as well as the global requirement. This 'Associate Degree in Blood Transfusion Medicine' program will play a pivotal role in fulfilling demand-driven human capital development in blood banking, critical for Pakistan.

Dr Saba Jamal



## ABOUT THE PROGRAM



### SCOPE

The quality of higher education has been identified as one of the key factors which allow individuals to succeed in a global competition. This Program is designed to improve blood safety through the development and delivery of need-driven, international quality education to optimize blood safety.



### GOALS OF PROGRAM

Associate Degree in Blood Transfusion Medicine is a 2-year program being introduced in Pakistan that leads the way in providing high-quality education and professional development for blood banking professionals.

**By the end of the 2-year Associate Degree Program in Blood Transfusion Medicine, students will be able to:**

- Provide safe and skilled blood banking services following standard operating procedures.
- Communicate effectively with healthcare professionals, donors and their relatives in the workplace.
- Demonstrate effective and professional team working skills in healthcare settings.





## AFFILIATION AND DEGREE AWARDING INSTITUTE

For this Associate Degree Program, the Indus Hospital & Health Network is affiliated with the National University of Medical Sciences (NUMS), the research-led institution that provides opportunities to undergraduate and postgraduate education in Medicine, Dentistry, Nursing, Allied Health, and Veterinary Sciences with a necessary add-on the Social Sciences and Liberal Arts with a multidisciplinary faculty.

NUMS aiming to develop a university-led healthcare system in the country was established as a Federal Public Sector University through an Act of Parliament on October 31, 2015. The inspiration to promote and achieve excellence in advanced health education, research, and service delivery has been a constant motivation for NUMS to adapt and adopt innovative and creative teaching and learning approaches to improve existing knowledge and practices in the fields of medical and allied life sciences-both pure and applied-including fields of biomedical engineering and technologies, veterinary, biogenetic, social and behavioral sciences.

The shared drive for bringing in the internationally acclaimed university-led healthcare system facilitated this affiliation between IHHN and NUMS. As it grows, NUMS, with its affiliated institutes, has the potential to become a force multiplier by supporting other service providers in this field, developing partnerships with the several advanced national and international universities, industrial, governmental and community-based stakeholders in consonance with a national vision and plan to develop a knowledge-based economy. This Associate Degree in Blood Transfusion Medicine is another step towards developing a well-qualified, goal-oriented, internationally competitive force of technologists-A Shared Promise by NUMS and IHHN

إِنِّي أَعْلَمُ مَا لَا تَعْلَمُونَ ﴿٣٠﴾

Allah said,

**"Indeed, I know that which you do not know."**

(Al Quran; Surah Al-Baqarah verse: 30)

### **(The key inspiration behind the creation of the NUMS' identity)**

Allah The Creator, has announced His faith in and placed, humanity above others. This poses challenges to NUMS in affiliation with IHHN to stimulate 'understanding and improving life' through the right set of knowledge, skills, values, and actions among their students.

---

# ACADEMIC PROGRAM

## COURSE GRID

Semester	Compulsory Courses		Foundation Courses		Major Courses		Credit Hours / Semester				
	#	6 courses 18 Credit Hours Subjects	Credit Hrs.	#	6 Courses 18 Credit Hours Subjects	Credit Hrs.		#	8 Courses 24 Credit Hours Subjects	Credit Hrs.	
	I	1	English I	3	1	Basics of Anatomy and Physiology		3(2+1)			18
2		Pakistan and Islamic Studies/ Ethics (For Non-Muslims)	3	2	Blood Collection and Donor Testing	3(2+1)					
3		Introduction to Computers	3 (2+1)	3	Clinical Practicum - Blood Collection and Donor Testing	3					
II	4	English III	3	4	Basics of Cardiovascular Anatomy and Physiology	3(2+1)			15		
	5	First Aid and Basic Life Support	3 (0+3)	5	Basic Haematology	3(2+1)					
III	6	English III	3				1	Immunohematology-I	3 (2+1)	15	
							2	Basic Blood Banking	3 (2+1)		
							3	Blood Component Preparation and Modifications	3 (1+2)		
							4	Basic Coagulation and Apheresis	3 (1+2)		
IV							5	Immunohematology-II	3 (1+2)	18	
							6	Hemovigilance and Transfusion Reactions	3 (1+2)		
							7	Quality Assurance in Blood Banking	3 (1+2)		
							8	Clinical Practicum- all above	3		
							Elective Courses				
							Students will have the option to choose any TWO of the following Electives.				
							1	Management Skills and Record-Keeping	3 (1+2)		
							2	Quality Assurance in Clinical Lab	3 (1+2)		
3	Automation and Information Technology in Blood Banking	3 (1+2)									
Course Groups		Compulsory Courses: Credit Hrs.		Foundation Courses: Credit Hrs	Major and Elective Courses-Any TWO: Credit Hrs.		Overall Credit Hrs.				
Total		18		18	30		66				



## FACILITIES AT CAMPUSES

### PHYSICAL AND TECHNOLOGICAL RESOURCES

Each campus is headed by FCPS Hematology qualified physician, with another hematologist (FCPS/ MPhil Hematology), at least 4 MBBS qualified lecturers, training and quality assurance teams along with multiple MLT qualified technologists. Each facility has onsite administrative, student affairs, transport, finance, Information Technology (IT), biomedical engineering, supply chain and human resource teams. All the facilities are paperless with the availability of failover internet primary and secondary fibre links from 2 different service providers to maintain 99.9% internet availability.

All sites receive electricity via express feeders with 100% generator back up and adequate water supply. The offices, classrooms, tutorial rooms, examination office, library, training and computer labs are fully air-conditioned and have adequate space. All facilities are monitored closely by CCTV.

### EDUCATIONAL RESOURCES ON-CAMPUS & DIGITAL RESOURCE LIBRARY

Access to information is the key to provide quality education. All the four campuses have access to on-campus and digital libraries comprising updated academic resources including books, reference books, and relevant research journals and other informative materials. The prime goal of this library is to provide information to enhance AD-BTM students' academic and blood transfusion medicine related knowledge and skills.



## SKILL TRAINING LABORATORY IN BLOOD BANKING

The skill training laboratory at each campus has high-end quality blood banking equipment including serofuges, agglutination viewers, water baths, pipetting adjusters, and reagent fridges etc. To ensure clinical practicum/internship program the blood banks have good quality equipment and well trained technical staff for supervision. For instance,

- Wet lab bench space
- Services include training on all equipment and technical assistance in all equipment operations.



## SMART CLASSROOM

All four campuses have smart classrooms to facilitate technology-enhanced learning that enhances the way of teaching and learning digitally. Each class is equipped with digital displays, tabs and other audio/visual components that make lectures easier, engaging and more interactive.



## HOSPITAL CANTEEN

Having been situated in the hospital vicinity, all campuses offer hospital canteen's healthy food.



## HEALTH SERVICES

As all the campuses are located in the hospital, students will have access to a full spectrum of emergency care and treatment. In addition, students will have access to the First Aid box with standard medicines and tools under well-qualified staff deputed within their academic facilities.



## ADMISSION POLICY



### ADMISSION REQUIREMENTS

For admissions in the associate degree in Blood Transfusion Medicine, the candidate must have F.Sc./A level with minimum **45%** marks from HEC recognized board in the following subjects:

- Pre-Medical
- Medical Technology



### LIST OF DOCUMENTS TO BE SUBMITTED

Following documents must be submitted along with application form:

- Matriculation/O Level Mark-Sheet and Certificate
- Intermediate/A Level Mark-Sheet and Certificate
- Candidate's Computerized National Identity Card/B-Form/Passport
- Parent/Guardian's Computerized National Identity Card (if available)

## ADMISSION REQUIREMENTS

Admission Processing Fee (Non-Refundable)	PKR 2,800 Pakistani Rupees
Admission Fee	18,000 PKR
Security Deposit (Refundable)	10,000 PKR
Tuition Fee (Per Semester)	60,000 PKR
Examination Fee (Per Semester)	15,000 PKR



### SCHOLARSHIP POLICY

Out of the total batch of 80 students, four **(5%)** students (one from each campus) scoring the highest CGPA will be awarded the scholarship with 100% waiver of the Tuition Fee. The scholarship students will have to pay the Examination Fee. In case of a tie, the scholarship will be awarded based on the following points:

- The highest attendance
- Age of the applicant. The older applicant will be preferred for the scholarship period.





## ACADEMIC SUPERVISION OF STUDENTS

Academic supervision is important to nurture a student's development. Supervision provides an opportunity to discuss a student's work and to help identify and explore key issues relevant to the individual's performance. Good supervision encourages students to reach their full potential and acquire the desired learning outcomes.

Ownership of learning in general, and problem-solving in particular, is vital for students to feel a sense of achievement. At the start of each semester, the students will be provided with clear goals and a plan of action in the form of guide books, module descriptors and semester schedules. The arrangements for academic supervision of the students include:

- Monitoring course attendance.
- Continuous assessments to monitor intended learning outcomes (marked and part of final semester results), arranged by the head office Department of Assessment and Evaluation (DAE).
- Multiple formative assessments in the form of quizzes (not marked or part of continuous assessment tests or final semester results) with proper post-activity feedback by the campus faculty.



- Supervised clinical practicums. Each student has a logbook that specifies learning activities. This logbook is verified by designated clinical supervisors.
- Student survey forms for course teachers and course management.
- Academic and Disciplinary Committee comprising Course Instructor, Semester In-charge and Assistant Professor. Arrangement of remedial sessions for defined underperformers.
- Academic counselor for regular consultation of students including for low achieving students. Course Instructors are responsible to identify student/s who shall be requiring intensive academic counselling.



## METHODS OF COMMUNICATION OF ACADEMIC COUNSELLING

The issues will be communicated to the students by verbal counselling as well as a written letter, officially received by each concerned student. On the occurrence of the second event, the Parent/Guardian of the concerned student will be notified by a written document officially received at the end of the Parent/Guardian Teacher meeting.



## GROUND RULES FOR STUDENT REQUIRING ACADEMIC COUNSELING

- Keep to arranged times-if the student cannot make the appointment, he/she must inform the tutor as soon as possible.
- Come prepared for supervision—have a plan or a draft copy of a spotted lacking topic or skill to present to the tutor.
- If the student feels he/she is not receiving adequate service from the counselor, he/she first must raise this with the tutor concerned. In case of inadequate response by the tutor, the student must inform the head of the campus.
- Always remain professional.



## ARRANGEMENTS FOR QUALITY ASSURANCE (QA)

In order to develop the student's ability to be responsible and gain confidence in herself/himself and in the institute, each campus has a comprehensive quality assurance mechanism. This QA mechanism aims to reach the highest levels possible (locally and internationally) through quality practice that could keep the student's academic path from obstacles and to complete the program during the given period.

### Some salient features of the QA mechanism are:

- Faculty Development and Training:
  - Teaching Methodologies
  - Assessment and Evaluation
  - Test Item Construction
  - Feedback
  - Online Education
- Faculties regular self-evaluations to analyze their contribution to the achievement of institutional strategic goals.
- Annual Institutional evaluation of each faculty to review the academic goals and progress.
- Monitoring by central Quality Enhancement Cell (QEC) of the institution, in the head office in Karachi.
- Monitoring of course by campus QEC Coordinator.
- Self-Assessment Report (SAR) by the campus program team written as per HEC Pakistan prescribed template.
- Review of SAR by head office QEC Institutional team.

- Review of SAR by external team i.e. NUMS QEC team.
- Review of the final quality of successful graduates by stakeholder survey's i.e. course instructors, clinical supervisors, employers of the graduates and supervisors of postgraduate programs.
- Grievance Committee to review student/faculty grievances.
- Retention of qualified faculty by remunerating at least equal to market rates.
- Establishment of a Centralized Department of Assessment and Evaluation (DAE) in Karachi head office with a sub-office in each campus.
- Result review committee.
- Curriculum revision committee/s to improve learning objectives.



## ADMINISTRATIVE SUPPORT

- Head Quality Enhancement Cell (QEC)-Karachi Head Office
- Coordinator QEC-Each Campus
- Office Assistant



## TECHNICAL SUPPORT

- Computer Systems
- Printers and Scanners
- Multimedia and Video conferencing equipped Classrooms/Teaching Facilities
- Well-equipped training laboratories
- IT facilities
- Allocated Fund



## CONTACT US

---

For more information, please contact:

### **ADMISSION OFFICE**

Contact Number: +92 301 8284369 | +92 304 0495730

Email: [adbtm.info@tih.org.pk](mailto:adbtm.info@tih.org.pk) | [admissions.iuhs@tih.org.pk](mailto:admissions.iuhs@tih.org.pk)

## Karachi

The Indus Hospital, Korangi  
Crossing, Karachi.

+92 21 35112709-17

+92 21 38096661

Ext: 2611, 2607, 2601

+92 301-8284369

## Jamshoro

Regional Blood Center, Near Rufaida Girls  
Nursing Hostel LUMHS, Jamshoro.

+92 222115007 Ext:115

+92 222115006

+92 3023977487

## Multan

Regional Blood Center, Adjacent of Kidney  
Diseases (MIKD), Muzaffargarh Road, Multan.

+92 616354501-3

+92 300 6367024

## Bahawalpur

Regional Blood Center, Opp. CCU, Bahawal,  
Victoria Hospital, Bahawalpur.

+92 62 2501004, Ext: 106

+92 62 2501008, Ext: 104

+92 62 2501314, Ext: 111

+92 314-9624320



**NUMS**  
NATIONAL UNIVERSITY  
OF MEDICAL SCIENCES