DR. ISHRAT UL EBAD KHAN INSTITUTE OF BLOOD DISEASES (DIEKIBD)

DOW UNIVERSITY OF HEALTH SCIENCES

STRATEGIC PLAN

(2024 – 2027)

Pioneering Excellence | Inspiring Innovation

To Heal | To Educate | To Discover


بسم الله الرحمن الرحيم

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DIRECTOR'S MESSAGE

The Department of Hematology, DUHS is a vital part of DIEKIBD (Dr. Ishrat- ul-Ebad Khan Institute of Blood Diseases), along with Blood Bank. Apart from quality testing services to the patients we also embark on research and education. We are going by international standards of medical education with top-of-the line faculty as well as infrastructure in terms of building, paraphernalia and labs. We not only produce competent pathologists and medical technologists, but we also inculcate high professional values in them during their training tenure. I appreciate the fact that this institution is making a manifest contribution in promoting hematology and transfusion medicine in the province of Sindh. We are confident that DIEKIBD will provide quality services in healthcare and education in the community like its parent institute.

Dr. Uzma Bukhari
Director DIEKIBD DUHS

HEAD'S MESSAGES

Dr. Saima Minhas
Head of Department, Hematology, DIEKIBD, DUHS

By the approval of syndicate of Dow University of Health Sciences in 2010 – 11, Dr. Ishrat-ul-Ebad Khan Institute of Blood Diseases (DIEKIBD) was established in the premises of Ojha campus. It offers state-of-the-art diagnostic services at an affordable cost in alignment with the vision and mission of DUHS. Over the years this institute has not only provided diagnostic services, but also research and academic opportunities, including M. Phil & PhD, and fellowship programs in Hematology.

Dr. Kashif Hafeez Shaikh
Head of Quality Assurance, DIEKIBD, DUHS

The new millennium has witnessed tremendous advancement in the field of Hematology. The modern Laboratory has to keep pace with the new developments by establishing a world class facility with state-of-the-art quality assurance program, so as to ensure a high degree of precision, accuracy and reliability of test results in a systematic, scientific and analytical environment. We at the department of Hematology, DIEKIBD have always been on the forefront to strive hard and maintain high quality standards as the premier institute in the field of Laboratory medicine.

EXECUTIVE SUMMARY

The Department of Hematology, DIEKIBD was established in 2010 serving as one of the disciplines of Clinical laboratories with state-of-the-art facilities both in routine and special hematology. The Department of Hematology's Strategic Plan for 2024-2027 focuses on enhancing diagnostic services, academic programs, research, and quality management to meet national and international standards. The plan prioritizes efficiency, quality, and innovation in all areas, aiming to strengthen the department's leading role in healthcare, education, and research. Our mission is to enhance patient outcomes by:

- Operational Excellence: Streamline workflows to improve turnaround times and diagnostic accuracy.
- Technology & Innovation: Incorporating updated diagnostic technologies like Capillary Zone Electrophoresis (CZE) and Flow Cytometry.
- Quality & Accreditation: Maintain high standards through continuous quality improvement and accreditation.
- Patient-Centered Care: Enhance clinician communication and prioritize timely services for critical cases.
- Staff Development: Provide ongoing training to foster expertise and research participation.
- Financial Growth: Introduce cost-effective methods and expand service offerings.
- Research & Collaboration: Partner with institutions to drive hematology research and innovation.

The current key objectives include implementing Capillary Zone Electrophoresis (CZE) and Flow Cytometry to improve diagnostic precision, launching the CPSP-accredited MCPS Clinical Pathology program, and establishing the department as a CPSP Examination Center for postgraduate assessments. The plan also emphasizes building a strong research culture through workshops, increased publications, and enhanced grant management. Structured seminars and collaborative events will promote continuous learning and professional growth. A Quality Management System (QMS) will be developed to achieve comprehensive ISO 15189 accreditation, ensuring reliable diagnostic services. Clear timelines, resource allocation, and continuous monitoring will guide the timely implementation of these goals, positioning the department as a center of excellence in hematology, research, and healthcare innovation. This strategic roadmap reflects the department's commitment to becoming a center of excellence in hematology by integrating cutting-edge technology, academic excellence, and quality standards to enhance patient care, research, and professional development.

ABOUT THE INSTITUTE

The Department of Hematology, DIEKIBD is a distinguished institute specialized in diagnostics, research, and patient care. It has established itself as a leader in hematology by adopting innovative diagnostic methodologies and research advancements. The institute's core mission is to enhance patient outcomes through precision medicine, state-of-the-art laboratory services, and evidence-based clinical practices.

The Department of Hematology plays a pivotal role in achieving this mission by offering specialized testing facilities for a wide range of hematological disorders, including anemia, leukemia, lymphoma, coagulation disorders, and hemoglobinopathies. The department provides cutting-edge hematology testing, including complete blood count (CBC), coagulation studies, hemoglobin electrophoresis, and bone marrow analysis for hematological malignancies. It is comprised of highly qualified hematologists and laboratory technologists; the team ensures accurate diagnoses and quality services. The department actively engages in clinical research and quality improvement programs to advance the field of hematology. As an academic institution, the department offers training programs, workshops, and continuing medical education (CME) for healthcare professionals to stay updated with the latest advancements. The department adheres to international standards and participates in external proficiency testing programs such as (Randox International Quality Assessment Scheme) RIQAS to ensure diagnostic accuracy and reliability.

With a steadfast commitment to excellence, the Department of Hematology, DIEKIBD continues to be a leading institution in the field, offering high-quality patient care, innovative research, and comprehensive training in the field of hematology.

INTRODUCTION AND OVERVIEW

The Dr. Ishrat-ul-Ebad Khan Institute of Blood Diseases (DIEKIBD) is a premier institute dedicated to hematology, transfusion medicine, and blood-related disorders. Established in 2010 under the Dow University of Health Sciences (DUHS), the department of Hematology, DIEKIBD has grown into a leading center for diagnostics, research, and postgraduate education in hematology. The institute offers state-of-the-art laboratory services, including routine and specialized hematology tests, coagulation studies, bone marrow analysis, and hemoglobin electrophoresis. The department of Hematology, DIEKIBD is committed to excellence in patient care, academic training, and clinical research, ensuring alignment with international quality standards. With a focus on innovation, precision medicine, and professional development, the institute plays a crucial role in advancing hematology in Pakistan. Through its strategic collaborations, faculty expertise, and modern infrastructure, the department of Hematology, DIEKIBD continues to be a pioneer in blood disease diagnostics and patient care.

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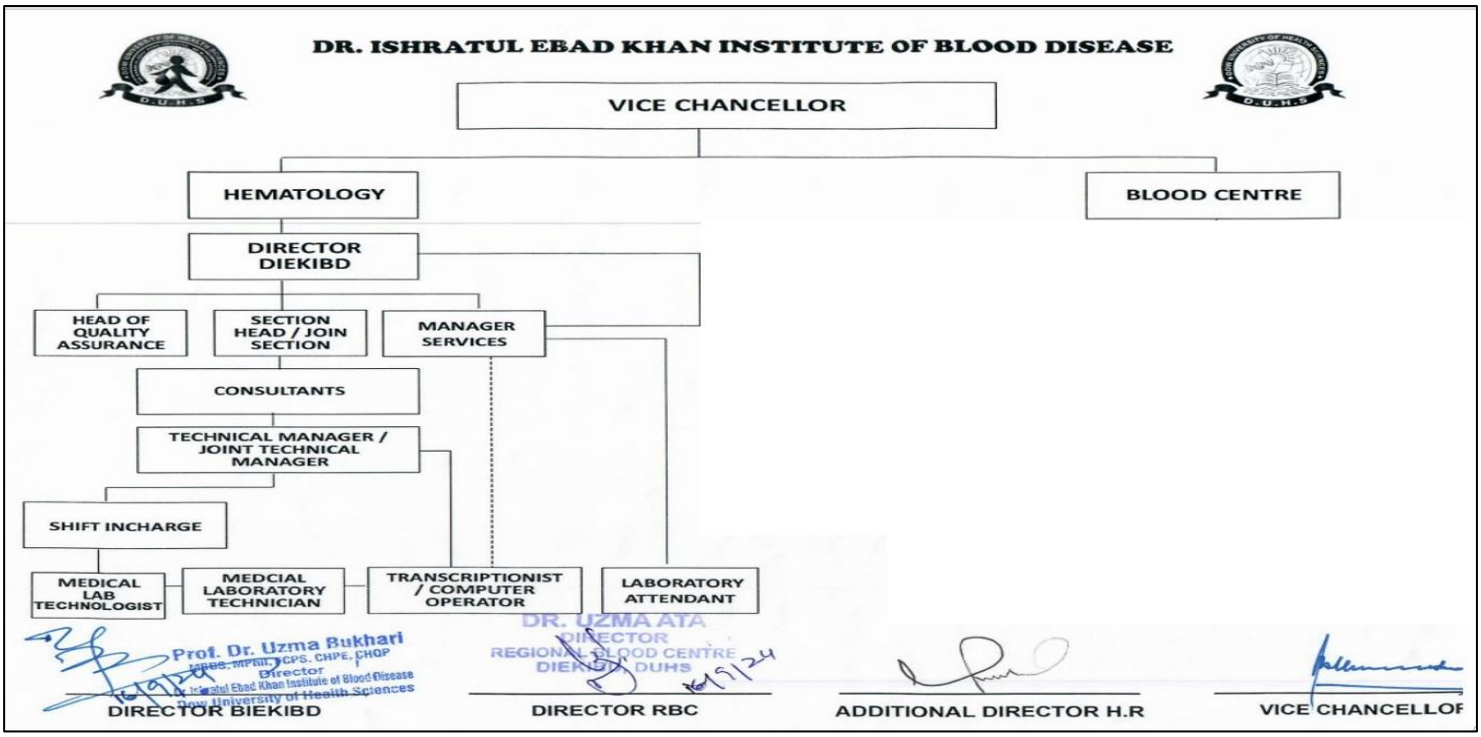
INSTITUTIONAL ORGANOGRAM



SECTION I: OVERVIEW OF STRATEGIC PLANNING PROCESS

The department of hematology at DIEKIBD aims to enhance diagnostic services, education, and research with quality improvement and to align these with international healthcare standards. For this purpose, our working group members highlighted key opportunities and challenges through the SWOT analysis, leading to a well-defined vision, mission, and core values centered on quality, innovation, and leadership.

Our core focus areas are operational excellence, technology integration, academic growth, research development, and financial sustainability. This includes introduction of new tests, such as Capillary Zone Electrophoresis (CZE) and Flow Cytometry, starting the MCPS Clinical Pathology program, enhancement of research culture, and securing complete ISO 15189 accreditation.

The plan includes structured goals, resource allocation, and key performance indicators (KPIs) to ensure measurable progress. Our Quality Management System (QMS) will guide ongoing monitoring and continuous improvement through regular audits, training, and feedback mechanisms. By integrating cutting-edge diagnostics, academic excellence, and research advancements, the department aims to establish itself as a center of excellence in hematology, providing high-quality patient care and global contributions in the field of hematology.

COMMITTEE MEMBERS

Committee members	Designation	Roles
Dr. Uzma Bukhari	Director, DIEKIBD	Chairperson
Dr. Saima Minhas	HOD, Department of Hematology	Joint Chairperson
Dr. Kashif Hafeez Shaikh	Head of Quality Assurance, Senior Consultant, Department of Hematology	Secretary
Dr. Zaenul Abideen	Consultant, Department of Hematology	Member
Dr. Almas Khan	Consultant, Department of Hematology	Member
Dr. Muhammad Rizwan	Consultant, Department of Hematology	Member
Mr. Salman	Manager Services, Department of Hematology	Member
Ms. Hina Qureshi	Manager Technical, Department of Hematology	Member

SECTION II: VISION, MISSION, & VALUES

VISION

To be a pre-eminent academic institution committed to changing and saving lives.

MISSION

Providing outstanding patient-centered education, training, and clinical care informed by cutting-edge research and innovation, generating and disseminating new knowledge

VALUES

- **Customer Service**
  - Put students first
- **Empathy & Compassion**
  - Understand before you judge
  - Be concerned for the sufferings and misfortunes of others

- Excellence
    - Be the best and commit to exceptional quality and service
- Innovation
    - Encourage curiosity, imagine, create, and share
- Teamwork
    - Engage and collaborate
- Integrity & Leadership
    - Be a role model and influence others to achieve their best
    - Have the courage to do the right thing
    - Hold yourself and others accountable
- Respect & Collegiality
    - Be kind
    - Listen to understand
    - Value different opinions

STATEMENT OF PURPOSE

Our purpose is to provide world-class diagnostic services, foster innovative research in hematology, and develop skilled healthcare professionals to meet the evolving needs of the healthcare system.

SECTION III: ASPIRATIONAL INSTITUTIONS

The Department of Hematology, DIEKIBD aspires to align its 2024-2027 Strategic Plan with leading national and international institutions recognized for excellence in hematology, diagnostics, education, and research. Nationally, institutions like Aga Khan University Hospital (AKUH), Shaukat Khanum Memorial Cancer Hospital (SKMCH&RC), Indus Hospital and Armed Forces Institute of Pathology (AFIP) serve as benchmarks for advanced laboratory services, postgraduate training, and research in hematology. Internationally, Mayo Clinic (USA) and MD Anderson Cancer Center (USA) set the standard for precision diagnostics and quality accreditation (ISO, CAP, CLIA). The department also looks to align its postgraduate education with the Royal College of Pathologists (UK) and guidelines from the American Society of Hematology (ASH). By integrating these best practices, advanced technologies, and quality assurance models, the department of Hematology, DIEKIBD aims to position itself as a regional center of excellence in hematology, enhancing diagnostic accuracy, research output, and academic training.

SECTION IV: STRATEGIC GOALS

Goal 01: **To enhance efficiency and accuracy through Automation of semen analysis test**

Objective 1: Automated semen analysis to improve efficiency and accuracy

Goal 02: **Implementing Capillary zone electrophoresis (CZE) for hemoglobin electrophoresis**

Objective 1: Implement CZE for hemoglobin electrophoresis to improve diagnostic capabilities.

Goal 03: **Introduce Flow cytometry test into hematology services**

Objective 1: Introduce Flow Cytometry testing to improve diagnostic accuracy and efficiency.

Goal 04: **Implementation of MCPS Clinical Pathology program with focus on finished quality product**

Objective 1: Implement the CPSP-accredited MCPS Clinical. Pathology program with focus on quality education and training.

Goal 05: **Organize structured workshops/seminars in Hematology**

Objective 1: Organize structured workshops/seminars in Hematology to promote continuous learning.

Goal 06: **To enhance research culture and grant management**

Objective 1: Enhance research culture and grant management in the department.

Goal 07: **To successfully establish as CPSP examination center in hematology**

Objective 7: Establish CPSP Examination Center in Hematology.

OBJECTIVES, OKRs & KPIs

Goal 01: To enhance efficiency and accuracy through Automation of semen analysis test							
Goal Statement: To enhance the efficiency and accuracy of semen analysis testing through automation, ensuring more reliable results and faster processing times.							
Objectives & Key results (OKRs)							
Objective 1: Automated semen analysis to improve efficiency and accuracy							
Objective	**Key Results**	**KPI**	**Measurement Method**	**Target**	**Person Responsible**	**Resource Requirement**	**Timeline**
Automated semen analysis to improve efficiency and accuracy	KR 1.1: Achieve 98% diagnostic accuracy through automation.	Accuracy percentage	Compare automated results with manual analysis and EQA performance.	98% by 2027	HOD Hematology + Head of Quality Assurance	Automated semen analyzer, EQA participation	Q1 2025 – Q4 2026
	KR 1.2: Reduce turnaround time (TAT) by 50%.	TAT reduction	Monitor monthly pre- and post-automation TAT.	50% reduction by Q4 2025	Lab Manager	Workflow redesign, software integration	Q1 – Q4 2025
	KR 1.3: Train 100% of staff on the new system.	% staff trained	Track training completion and certification.	100% trained by Q2 2025	Lab Manager	Training materials, Workshop	Q1 – Q2 2025
	KR 1.4: Fully integrate automated analyzer with LIS.	System compatibility	Validate system integration through trial runs.	Completed by Q2 2025	IT Manager	LIS upgrade, technical support	Q1 – Q2 2025
	KR 1.5: Ensure < 1% discrepancies through automated results.	Error rate	Track monthly error rates and report discrepancies.	< 1% discrepancy by Q4 2026	Head of Quality Assurance + Lab Manager	Monitoring tools	Q1 2025 – Q 4 2026
	KR 1.6: Achieve ISO 15189 accreditation for the automated system.	Accreditation status	Conduct internal audits and external accreditation checks.	Accreditation by Q4 2027	Head of Quality Assurance + Lab Manager	QMS development, ISO fees	Q4 2027

Goal 02: Implementing Capillary zone electrophoresis (CZE) for hemoglobin electrophoresis							
Goal Statement: To implement Capillary Zone Electrophoresis (CZE) technology for hemoglobin electrophoresis, improving diagnostic capabilities and precision in hemoglobinopathies.							
Objectives & Key results (OKRs)							
Objective 1: Implement CZE for hemoglobin electrophoresis to improve diagnostic capabilities							
Objective	**Key Results**	**KPI**	**Measurement Method**	**Target**	**Person Responsible**	**Resource Requirement**	**Timeline**
Implement CZE for hemoglobin electrophoresis to improve diagnostic capabilities	KR 1.1: Achieve 98% diagnostic accuracy in hemoglobin analysis.	Accuracy percentage	Compare CZE results with HPLC method and external quality assessments (EQA).	98 % by Q4 2026	HOD Hematology + Head of Quality Assurance	CZE equipment, EQA participation	Q1 2025 – Q4 2026
	KR 1.2: Reduce turnaround time (TAT) by 20%.	TAT reduction	Monitor pre- and post-implementation TAT.	20% reduction by Q2 2026	Lab Manager	Workflow optimization, software integration	Q1 2025 – Q4 2025
	KR 1.3: Train 100 % of lab staff on CZE operation.	% staff trained	Track training completion and certification.	100% trained by Q2 2025	Lab Manager	Trainers, training materials	Q1 – Q2 2025
	KR 1.4: Ensure < 1% discrepancies using CZE	Error rate	Track monthly error rates and report discrepancies.	< 1% discrepancy by Q4 2026	Head of Quality Assurance + Lab Manager	Monitoring tools	Q1 2025 – Q4 2026
	KR 1.5: Obtain ISO 15189 accreditation for CZE methodology.	Accreditation status	Internal audits and external accreditation checks.	Accreditation by Q4 2027	Head of Quality Assurance + Lab Manager	QMS development, ISO fees	Q4 2027

Goal 03: Introduce Flow cytometry test into hematology services							
Goal Statement: To introduce Flow Cytometry testing into hematology services, enhancing diagnostic accuracy and improving overall efficiency in hematological disorders.							
Objectives & Key results (OKRs)							
Objective 1: Introduce Flow Cytometry testing to improve diagnostic accuracy and efficiency							
Objective	**Key Results**	**KPI**	**Measurement Method**	**Target**	**Person Responsible**	**Resource Requirement**	**Timeline**
Introducing Flow Cytometry testing to improve diagnostic accuracy and efficiency	KR 1.1: Achieve 98% diagnostic accuracy for hematological disorders using Flow Cytometry.	Accuracy percentage	Compare Flow Cytometry results with traditional methods	98% by Q4 2026	HOD Hematology + Head of Quality Assurance	Flow Cytometer, EQA participation	Q 1 2026 – Q4 2026
	KR 1.2: Reduce turnaround time (TAT) for tests by 20%.	TAT reduction	Monitor pre- and post-implementation TAT.	20% reduction by Q2 2026	Lab Manager	Workflow optimization, software integration	Q1 2026 – Q2 2026
	KR 1.3: Train 50 % of lab staff on Flow Cytometry operation.	% staff trained	Track training completion and certification.	50 % trained by Q4 2025	Lab Manager	Trainers, training materials	Q1 – Q2 2026
	KR 1.4: Ensure < 1% discrepancies between Flow Cytometry and traditional results.	Error rate	Compare error rates between methods.	< 1% discrepancy by Q4 2026	Lab Manager	Monitoring tools	Q1 2026 – Q4 2026
	KR 1.5: Attain 90 %Clinical Integration.	% Clinician satisfaction	Collect feedback through survey with clinicians	90% Clinician satisfaction by Q4 2026	Head of Quality Assurance	Monitoring tools	Q1 2027
	KR 1.6: Obtain ISO 15189 accreditation for Flow Cytometry methodology.	Accreditation status	Internal audits and external accreditation checks.	Accreditation by Q4 2027	Head of Quality Assurance + Lab Manager	QMS development, ISO fees	Q4 2027

Goal 04: Implementation of MCPS Clinical Pathology program with focus on quality finished product							
Goal Statement: To implement the CPSP-accredited MCPS Clinical Pathology program, focusing on delivering high-quality education and training to enhance expertise in clinical pathology.							
Objectives & Key results (OKRs)							
Objective 1: Implement the CPSP-accredited MCPS Clinical Pathology program with focus on quality education and training							
Objective	**Key Results**	**KPI**	**Measurement Method**	**Target**	**Person Responsible**	**Resource Requirement**	**Timeline**
Implement the CPSP-accredited MCPS Clinical Pathology program with focus on quality education and training	KR 1.1: Achieve CPSP accreditation for the program.	Accreditation status	Internal and external audit reports.	CPSP accreditation by Q4 2025	Program Director + Head of Quality Assurance	Program development, accreditation fees	Q1 – Q2 2025
	KR 1.2: Ensure 100% curriculum alignment with CPSP standards	% curriculum completion	CPSP Curriculum standards	100 % curriculum alignment with CPSP	Program Director + Head of Quality Assurance	Curriculum committee, Regulatory consultation	Q3 2025 – Q2 2027
	KR 1.3: Enroll in the first batch of trainees.	Number of enrolled trainees	Admission records.	4 trainees by Q4 2025	Postgraduate school	Marketing, admission portal	Q3 2025
	KR 1.4: Achieve a 90% pass rate in MCPS certification exams.	Certification pass rate	Track pass rates via CPSP board results.	90% by 2027	Program Coordinator	Exam preparation resources	Q4 2027

Goal 05: Organize structured workshops/seminars in Hematology							
Goal Statement: To organize structured workshops and seminars, promoting continuous medical education and professional development in the field of Hematology.							
Objectives & Key results (OKRs)							
Objective 1: Organize structured workshops/seminars in Hematology to promote continuous learning							
Objective	**Key Results**	**KPI**	**Measurement Method**	**Target**	**Person Responsible**	**Resource Requirement**	**Timeline**
Organize structured workshops/seminars in Hematology to promote continuous learning	KR 1.1: Conduct at least 4 workshops/seminars annually.	Number of workshops conducted	Workshop reports	4 workshops per year	HOD Hematology	Venue, speakers, materials	Annually
	KR 1.2: Ensure 90% participant satisfaction rate.	Participant feedback score	Post-event survey results	90% satisfaction rate per event	Program Coordinator	Survey tools, feedback system	Ongoing
	KR 1.3: Achieve 80% attendance from target participants.	% attendance	Attendance tracking	80% attendance per event	Marketing Officer	Registration system, marketing materials	Ongoing

Goal 06: To enhance research culture and grant management							
Goal Statement: To enhance the research culture and streamline grant management within the department, fostering more innovative and productive research environment.							
Objectives & Key results (OKRs)							
Objective 1: Enhance research culture and grant management in the department							
Objective	**Key Results**	**KPI**	**Measurement Method**	**Target**	**Person Responsible**	**Resource Requirement**	**Timeline**
Enhance research culture and grant management in the department	KR 1.1: Submit at least 2 grant applications annually.	Number of grant proposals submitted	Proposal submission records.	2 applications per year	HOD Hematology	Proposal and administrative support	Annually
	KR 1.2: Publish 4 high-impact papers in peer-reviewed journals by the end of the year.	Number of high-impact papers	Track the total number of research papers with Impact Factor	4 high-impact research papers approved per year	HOD Hematology + Faculty	Budget for project proposals	Annually
	KR 1.3 Increase research publications by 20%.	Number of publications	Track publication data in peer-reviewed journals.	20% increase by Q4 2027	HOD Hematology + Joint section head	Research database access, journal subscriptions	2025-2027

Goal 07: To successfully establish as CPSP examination center in hematology							
Goal Statement: To successfully establish the CPSP Examination Center in Hematology, providing a recognized and accredited venue for examination and professional certification in hematology.							
Objectives & Key results (OKRs)							
Objective 7: Establish CPSP Examination Center in Hematology							
Objective	**Key Results**	**KPI**	**Measurement Method**	**Target**	**Person Responsible**	**Resource Requirement**	**Timeline**
Establish CPSP Examination Center in Hematology	KR 1.1: Obtain CPSP approval and accreditation.	Accreditation status	Review of CPSP audit and inspection reports.	Accreditation by Q2 2026	HOD Hematology	QMS development, accreditation fees	Q1 2026 – Q2 2026
	KR 1.2: Develop required infrastructure (exam rooms, equipment).	% infrastructure readiness	Facility audit and inspection.	100% readiness by Q1 2027	HOD Hematology + Head of PD+ Head of IT	Construction and equipment budget	Q1 2026 – Q4 2026
	K.R 1.3: Recruit and train faculty/staff as per CPSP standards.	% of trained faculty/staff	Training records and evaluations.	100% faculty/staff trained by Q2 2026	HOD Hematology	Training materials, honorarium	Q1 – Q2 2026
	KR 1.4: Conduct 2 successful pilot exams.	Number of pilot exams conducted	Pilot exam reports	2 pilot exams by Q2 2026	HOD Hematology + Faculty	Pilot exam resources	Q1 – Q2 2027
	KR 1.5: Achieving 90% candidate satisfaction.	Candidate feedback score	Post-exam surveys	90% satisfaction rate	Head of Quality Assurance	Survey tools	Q4 2027

SECTION V: RESOURCE PLANNING FOR ACHIEVING STRATEGIC GOALS

Resource allocation for the strategic goals outlined in the Department of Hematology's Strategic Plan (2024-2027) is structured to ensure optimal utilization of financial, human, and technological resources. Funding will be acquired and prioritized for the acquisition of advanced diagnostic tools, including automated semen analyzer, Capillary Zone Electrophoresis (CZE) and Flow Cytometry to enhance laboratory services. Human resource development will focus on recruiting skilled personnel and the hematology department will provide continuous education and training programs to ensure competency in new diagnostic methodologies. Infrastructure improvements will be allocated funds for laboratory expansion, procurement of essential equipment, and IT upgrades to support digital transformation initiatives. Research and development will receive dedicated funding to foster innovation, support clinical studies, and facilitate collaborations with academic institutes. Quality assurance measures, including the transition from RIQAS to CAP proficiency testing, will be supported with appropriate budgetary allocations to maintain compliance with international standards. Patient care initiatives will be strengthened by investing in automation, workflow optimization, and expanding access to specialized hematology services. Periodic review mechanisms will be implemented to assess financial efficiency and reallocate resources as needed to align with evolving departmental priorities and emerging challenges.

SECTION VI: IMPLEMENTATION AND MONITORING OF STRATEGIC PLAN

Goal 1: To enhance efficiency and accuracy through Automation of semen analysis test

Implementation Plan:

Step	Action Plan	Responsible Person	Deliverables	Timeline
1	Conduct feasibility study to assess automation needs.	HOD Hematology + Head of Quality Assurance	Feasibility report and system requirements.	Q4 2024
2	Select and procure an automated semen analysis system.	HOD Hematology+ Lab Manager + Procurement Team	Contract and purchase order.	Q1 2025
3	Install and validate the automation system.	Vendor + Lab Manager	Installation and validation certificates.	Q2 2025
4	Upgrade LIS to support automated analyzer integration.	IT Manager	LIS upgrade report.	Q1 – Q3 2025
5	Train all lab staff in system operation.	Lab Manager	Staff training certificates.	Q1 – Q3 2025
6	Conduct pilot testing comparing manual and automated results.	Head of Quality Assurance	Pilot test results and validation report.	Q2 2025
7	Launch full-scale automation and monitor KPI.	Lab Manager	Go-live report and KPI tracking framework.	Q4 2025
8	Participate in EQA programs to validate accuracy.	Head of Quality Assurance	EQA performance reports.	Q1 2026 – Q4 2027
9	Monitor and optimize TAT performance monthly.	Lab Manager	Monthly TAT reports.	Ongoing (post-launch)
10	Identify and resolve discrepancies between automated reports.	Head of Quality Assurance	Error analysis and resolution reports.	Q2 2025 – Q4 2026

Step	Action Plan	Responsible Person	Deliverables	Timeline
11	Achieve ISO 15189 accreditation for automated semen analysis.	Head of Quality Assurance + Lab Manager	Accreditation certificate.	Q4 2027

Strategic Goal 2: Implementing Capillary zone electrophoresis (CZE) for hemoglobin electrophoresis

Implementation Plan:

Step	Action Plan	Responsible Person	Deliverables	Timeline
1	Conduct feasibility study for CZE implementation.	HOD Hematology+ Head of Quality Assurance	Feasibility report and system requirements.	Q4 2024
2	Select and procure CZE equipment for hemoglobin analysis.	HOD Hematology + Lab Manager + Procurement Team	Contract and purchase order.	Q1 2025
4	Install and validate the CZE system.	Vendor + Lab Manager	Installation and validation certificates.	Q2 2025
3	Upgrade lab information systems (LIS) for CZE integration.	IT Manager	LIS upgrade report.	Q1 – Q3 2025
5	Train lab staff on CZE operation and troubleshooting.	Lab Manager	Staff training certificates.	Q1 – Q3 2025
6	Conduct pilot testing of CZE for hemoglobin analysis.	Head of Quality Assurance	Pilot test results and validation report.	Q3 2025
7	Launch full-scale CZE implementation and monitor KPI.	Lab Manager	Go-live report and KPI tracking framework.	Q4 2025
8	Participate in EQA programs to validate accuracy.	Head of Quality Assurance	EQA performance reports.	Q1 2026 – Q4 2027

Step	Action Plan	Responsible Person	Deliverables	Timeline
9	Monitor TAT and optimize workflows.	Lab Manager	Monthly TAT reports.	Ongoing (post-launch)
10	Identify and resolve discrepancies between CZE and HPLC method.	Head of Quality Assurance	Error analysis and resolution reports.	Q2 2025 – Q4 2026
12	Achieve ISO 15189 accreditation for CZE methodology.	Quality Manager + Lab Manager	Accreditation certificate.	Q4 2027

Strategic Goal 3: Introduce Flow cytometry test into hematology services

Implementation Plan:

Step	Action Plan	Responsible Person	Deliverables	Timeline
1	Conduct a feasibility study for introducing Flow Cytometry.	HOD Hematology+ Head of Quality Assurance	Feasibility report and system requirements.	Q1 2025
2	Select and procure a Flow Cytometer.	HOD Hematology+ Lab Manager + Procurement Team	Contract and purchase order.	Q4 2025
3	Upgrade laboratory information systems (LIS) for Flow Cytometry integration.	IT Manager	LIS upgrade report.	Q1 – Q4 2026
4	Install and validate the Flow Cytometry system.	Vendor + Lab Manager	Installation and validation certificates.	Q1- Q2 2026
5	Train lab staff on Flow Cytometry operation and troubleshooting.	Lab Manager	Staff training certificates.	Q1 – Q4 2026
6	Conduct pilot testing of Flow Cytometry for hematological analyses.	Head of Quality Assurance	Pilot test results and validation report.	Q4 2026

Step	Action Plan	Responsible Person	Deliverables	Timeline
7	Launch full-scale Flow Cytometry implementation and monitor KPIs.	Lab Manager	Go-live report and KPI tracking framework.	Q3 2026
8	Participate in EQA programs to validate accuracy.	Head of Quality Assurance	EQA performance reports.	Q 3 2026 – Q4 2027
9	Monitor TAT and optimize workflows.	Lab Manager	Monthly TAT reports.	Ongoing (post-launch)
10	Identify and resolve discrepancies between Flow Cytometry and traditional methods.	Head of Quality Assurance	Error analysis and resolution reports.	Q32026 – Q42027
11	Clinician feedback survey	Head of Quality Assurance	Survey reports.	Q4 2027
12	Achieve ISO 15189 accreditation for Flow Cytometry methodology.	Head of Quality Assurance + Lab Manager	Accreditation certificate.	Q4 2027

Strategic Goal 4: Implementation of MCPS Clinical Pathology program with focus on quality finished product

Implementation Plan:

Step	Action Plan	Responsible Person	Deliverables	Timeline
1	Conduct a needs assessment to align the program with CPSP requirements.	Program Director	Needs assessment report.	Q4 2024
2	Achieve CPSP accreditation for the program.	Program Director+ Head of Quality Assurance	Accreditation certificate.	Q1 – Q2 2025
3	Develop curriculum aligned with CPSP guidelines and submit for approval.	Curriculum Committee	Approved curriculum.	Q1 – Q2 2025
4	Identify and partner with requisite training departments.	Program Coordinator	Inter-department agreements.	Q1 – Q2 2025
5	Enroll the first batch of trainees and conduct orientation.	Admissions Officer	Trainee enrollment records.	Q3 2025
6	Implement structured rotations and regular assessments.	Program Coordinator + Supervisors	Rotation schedules and assessment reports.	Q3 2025 – Q2 2027
7	Conduct mock exams and workshops to prepare trainees for MCPS exams.	Supervisors + Faculty	Mock exam results and feedback.	Q3 2027
8	Monitor and provide feedback on trainee performance through assessments.	Supervisors + Faculty	Monthly progress reports.	Ongoing
9	Program Evaluation and Continuous Improvement	Program Coordinator+ Supervisors	Yearly evaluation report	Ongoing

Strategic Goal 5: Organize structured workshops/seminars in Hematology

Implementation Plan:

Step	Action Plan	Responsible Person	Deliverables	Timeline
1	Identify relevant topics and themes for Hematology workshops and seminars.	HOD Hematology + Faculty	List of topics and schedules	Q1 2025
2	Develop detailed agendas and training materials for each event.	Faculty + Speakers	Agendas and presentation slides	Before each event
3	Recruit expert speakers and facilitators.	Program Coordinator	Speaker contracts and agreements	Ongoing
4	Secure venues and necessary logistics for each event.	Operations Team	Venue bookings and logistics plan	1 month before each event
5	Promote events to target participants through online and offline channels.	Marketing Officer	Marketing campaign materials	1 month before each event
6	Implement a participant registration and tracking system.	Operations Team	Registration records	Ongoing
7	Conduct workshops/seminars as scheduled, ensuring smooth execution.	Program Coordinator	Event reports	As per schedule
8	Collect feedback from participants and speakers.	Operations Team	Post-event survey reports	Immediately after event
9	Analyze feedback and identify areas for improvement.	HOD Hematology + Faculty	Improvement reports	1-week post-event

Strategic Goal 6: To enhance research culture and grant management

Implementation Plan:

Step	Action Plan	Responsible Person	Deliverables	Timeline
1	Establish a Research cell to coordinate activities and monitor grants.	Research Coordinator	Office setup and staffing plan	Q 3 2025
2	Develop policies and SOPs for grant submission and management.	Research Coordinator	SOPs and policy documents	Q3 – Q4 2025
3	Create a centralized research database for ongoing projects.	IT Team	Operational research database	Q 4 2025
4	Launch a mentorship program to support residents in developing proposals.	Supervisors + Faculty	Mentorship framework	Q4 2025
5	Attend workshops on proposal writing, research ethics, and grant management.	Research Coordinator	Workshop schedules and reports	Quarterly
6	Identify national and international funding opportunities.	Research Coordinator +HOD Hematology	Funding opportunity tracker	Ongoing
9	Provide incentives for faculty and staff with successful publications and grants.	HR Department	Incentive policies	Q3 2026
10	Publish an annual research report highlighting key outcomes and new projects.	HOD Hematology	Annual research report	Annually

Strategic Goal 7: To successfully establish as CPSP examination center in hematology

Implementation Plan:

Step	Action Plan	Responsible Person	Deliverables	Timeline
1	Submit an application to CPSP for the establishment of an exam center.	HOD Hematology	Application documents	Q1 2026
2	Develop infrastructure according to CPSP guidelines (exam halls, equipment).	HOD Hematology + Head of PD + Head of IT	Facility setup and readiness report	Q1 2026 – Q4 2026
3	Recruit faculty members and staff to serve as assessment.	HR + HOD Hematology	List of examiners and contracts	Q2 2026
5	Conduct mock or pilot exams to test the process.	HOD Hematology	Pilot exam reports	Q1 – Q2 2027
6	Implement a feedback system for candidates and examiners.	Head of QA	Survey reports	Q2 2027
7	Address feedback, improve processes, and finalize protocols.	HOD Hematology	Process improvement report	Q3 2027
8	Achieve CPSP accreditation and certification.	Lab Director	Accreditation certificate	Q4 2027
9	Launch the examination center with formal announcements.	Marketing Officer	Launch event and promotional material	Q4 2027
10	Monitor and improve exam center operations on an ongoing basis.	Head of QA	Monthly audit reports	Ongoing

SECTION VII: LIST OF APPENDICES

No.	DESCRIPTION
A	SWOT Analysis
B	TOWS Matrix
C	Programs Offered at Department of Hematology

APPENDIX A: SWOT ANALYSIS

STRENGTHS	WEAKNESSES
1. DUHS's strong brand reputation as a leading healthcare institution. 2. Affiliation with a public sector teaching hospital, providing access to a broad patient base. 3. Highly qualified and experienced faculty and staff with clinical expertise. 4. State-of-the-art equipment with a Total Laboratory Automation (TLA) track system, improving efficiency and precision. 5. Affordable pricing with a wide range of diagnostic tests, enhancing patient accessibility. 6. Research potential through diverse and extensive data generation. 7. Active participation in ISO certification programs to ensure quality standards. 8. Professional and ethical work environment fostering productivity and teamwork.	1. Budget constraints limiting operational flexibility and new initiatives. 2. Space limitations, restricting expansion of services and infrastructure. 3. Heavy dependence on public sector funding, making resource allocation uncertain.
OPPORTUNITIES	**THREATS**
1. Collaborative research publications with national and international institutions. 2. Certificate courses for faculty and staff, enhancing skills and knowledge. 3. Access to the latest technology, including automation in semen analysis, CZE, and immunophenotyping by 2027. 4. Diverse and extensive patient pool, offering significant research and clinical opportunities. 5. CPSP recognition as a postgraduate study center, positioning the department as a leader in education. 6. Availability of research grants, such as the Vice Chancellor's Seed Funding Initiative (VCSFI).	1. Intense market competition from other diagnostic and academic institutions. 2. Challenges in retaining qualified staff due to salary constraints and competitive offers. 3. Inadequate infrastructure upgrades to meet evolving healthcare and regulatory requirements.

APPENDIX B: TOWS MATRIX

OPPORTUNITIES	THREATS
1. Collaborative research publications with national and international institutions. 2. Certificate courses for faculty and staff, enhancing skills and knowledge. 3. Access to the latest technology, including automation in semen analysis, CZE, and immunophenotyping by 2027. 4. Diverse and extensive patient pool, offering significant research and clinical opportunities. 5. CPSP recognition as a postgraduate study center, positioning the department as a leader in education. 6. Availability of research grants, such as the Vice Chancellor's Seed Funding Initiative (VCSFI).	1. Intense market competition from other diagnostic and academic institutions. 2. Challenges in retaining qualified staff due to salary constraints and competitive offers. 3. Inadequate infrastructure upgrades to meet evolving healthcare and regulatory requirements.

STRENGTHS	SO	ST
1. DUHS's strong brand reputation as a leading healthcare institution. 2. Affiliation with a public sector teaching hospital, providing access to a broad patient base. 3. Highly qualified and experienced faculty and staff with clinical expertise. 4. State-of-the-art equipment with a Total Laboratory Automation (TLA) track system, improving efficiency and precision. 5. Affordable pricing with a wide range of diagnostic tests, enhancing patient accessibility. 6. Research potential through diverse and extensive data generation. 7. Active participation in ISO certification programs to ensure quality standards. 8. Professional and ethical work environment fostering productivity and teamwork.	1. Conduct accredited diploma, degree & certification courses in hematology (MCPS & FCPS). 2. Integrate advanced technology into current work processes, to enhance efficiency, accuracy, and productivity (Automation in semen analysis, Capillary Zone Electrophoresis (CZE) and Immunophenotyping by Flowcytometry, till the year 2027).	1. Explore career paths to create opportunities for attracting and retaining human resources. 2. Integrate advanced technology into current work processes to keep DUHS employees abreast of the latest knowledge and skills.

WEAKNESSES	WO	WT
1. Budget constraints limiting operational flexibility and new initiatives. 2. Space limitations, restricting expansion of services and infrastructure. 3. Heavy dependence on public sector funding, making resource allocation uncertain.	1. Audits (technical) can improve the processes and lead to continuous improvement. 2. Latest technology, digital tools and data will help improve accuracy, reliability and turnaround time. 3. Courses for staff and faculty will help in provision of sufficient manpower.	1. Upgradation with cutting edge technology will not only improve revenue generation but also give market advantage and make the institute self-sufficient in resource generation/expenses.

APPENDIX C: PROGRAMS OFFERED AT DEPARTMENT OF HEMATOLOGY, DIEKIBD, DUHS

- FCPS Hematology - Accredited by CPSP and already started in January 2024.
- MCPS Clinical Pathology – Accredited by CPSP and will be started in January 2025.
- Enrollment Statistics

  2 x Postgraduate trainee FCPS - Hematology