

UNIVERSITY OF HEALTH SCIENCES, LAHORE

KHAYABAN-E-JAMIA PUNJAB, LAHORE

Zero Semester Curriculum for MPhil Haematology

1. Name of Program

MPhil Haematology

2. Title of Course

Zero Semester (Pre-MPhil Orientation and Laboratory Training)

3. Course Type

Mandatory (Non-Credit / Qualifying)

4. Duration

12 Weeks

5. Teaching / Training Institutions

- University of Health Sciences (UHS), Lahore
- Postgraduate Medical Institute (PGMI) / LGH Lahore

6. Rationale of the Zero Semester

The Zero Semester is designed to orient incoming MPhil Haematology trainees to the academic framework, laboratory workflow, diagnostic methodologies, research culture, and clinical–laboratory correlation required for postgraduate training. The module strengthens baseline technical competencies in hematology laboratory practice and prepares trainees for advanced coursework and research.

7. Course Objectives

Upon completion, the trainee will be able to:

- Understand academic regulations and assessment framework of MPhil Haematology
- Perform basic hematology laboratory procedures safely
- Interpret routine hematology investigations
- Correlate laboratory findings with clinical conditions
- Demonstrate competence in peripheral smear interpretation
- Understand principles of coagulation testing, transfusion practices, and special investigations
- Develop basic skills in research methodology and scientific writing

8. Mandatory Workshops:

- Smear Preparation
- Bone Marrow Biopsy Procedures
- Polymerase Chain Reaction
- Basic Microscopy Skills

8. Course Contents, Teaching Strategy & Assessment

Week	Theoretical Topics / Didactic Sessions	Practical / Clinical Activities	Learning Outcomes	Setting
Week 1	Orientation Session: Program structure, regulations, laboratory biosafety, quality assurance	Orientation to laboratory sections, safety drills, equipment introduction	Understand workflow, safety protocols, and training expectations	UHS Lahore
Week 2	Basic Hematology Principles: Hematopoiesis, blood cell morphology	CBC analysis, analyzer orientation, manual cell counting	Understand hematopoiesis and basic hematology parameters	LGH/UHS
Week 3	Peripheral Blood Examination	Preparation & reporting of peripheral smears	Identify RBC, WBC and platelet morphology	LGH/UHS
Week 4	Anemias: Classification & laboratory diagnosis	Case-based smear interpretation	Correlate anemia types with morphology	LGH/UHS
Week 5	Leukemias & Lymphoproliferative Disorders	Blast identification, abnormal cell morphology	Recognize malignant hematologic patterns	LGH/UHS
Week 6	Platelet Disorders	Platelet indices interpretation, smear correlation	Identify thrombocytopenia patterns	LGH/UHS
Week 7	Hemostasis & Coagulation Disorders	PT, APTT, INR interpretation	Understand coagulation pathways	LGH/UHS
Week 8	Transfusion Medicine Basics	Blood grouping, cross-matching observation	Understand transfusion workflow	LGH/UHS
Week 9	Bone Marrow Examination Principles	Observation of aspiration & trephine biopsy	Understand indications and morphology	LGH/UHS
Week 10	Special Hematology Tests	Reticulocyte count, ESR, sickling test	Perform special diagnostic tests	LGH/UHS
Week 11	Automation & Advanced Diagnostics	Flow cytometry orientation, analyzer QC	Exposure to advanced diagnostics	LGH/UHS
Week 12	Research Orientation & Scientific Writing	Literature review, synopsis structure	Prepare for thesis research	UHS

Continuous Weekly Activities (Weeks 1–12)

Laboratory Reporting & Case Portfolio

- Supervised smear reporting
- CBC interpretation
- Case documentation
- Quality control practices

Scientific Writing & Academic Skills

- Literature searching
- Reference management
- Research ethics orientation
- Presentation skills

Completion Requirement

Successful completion of Zero Semester is mandatory before formal enrollment in MPhil Haematology coursework.

DAILY PERFORMANCE REPORT (DPR)
MPhil Haematology – Zero Semester

TRAINEE INFORMATION

Name of Postgraduate Student: _____ **Department/Program:** _____
Rotation/Section: _____ **Host Institution:** _____

Supervisor / Focal Person: _____
Date: _____

DAILY ATTENDANCE

Arrival Time: _____ Departure Time: _____

ACTIVITIES PERFORMED TODAY

A. Laboratory Work

- ☐ CBC Analysis
- ☐ Peripheral Smear Preparation
- ☐ Microscopy
- ☐ Coagulation Testing
- ☐ Blood Grouping / Crossmatch
- ☐ Bone Marrow Observation
- ☐ Special Tests

Skill Performance Record

Domain	Activity	Observed / Performed	Supervisor Remarks
CBC Interpretation			
Peripheral Smear Reporting			
Coagulation Testing			
Blood Bank Procedures			
Bone Marrow Biopsy Procedure			
Quality Control Procedures			

Daily Reflection (Trainee)

Supervisor's Comments

Signatures

Postgraduate Student: _____

Supervisor / Focal Person: _____

UHS Coordinator (if applicable): _____

END OF ROTATION EVALUATION PROFORMA

Zero Semester – MPhil Haematology

Trainee Information

Field	Details
Name of Student	
Program	
Discipline	
Rotation Title	
Host Institution	
Rotation Duration	
Supervisor	
Evaluation Date	

Evaluation Criteria

Criteria	Excellent (5)	Good (4)	Satisfactory (3)	Needs Improvement (1–2)
Punctuality & Attendance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Professional Ethics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Laboratory Skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinical Correlation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reporting Accuracy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communication Skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teamwork	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Critical Thinking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Supervisor's Narrative Evaluation

Strengths:

Areas for Improvement:

Recommendations:

Signatures

Role	Name	Signature	Date
Rotation Supervisor			
Postgraduate Student			
UHS Coordinator			