PSYCHIATRY
STUDY GUIDE
FOR MBBS

INTRODUCTION TO THE INSTITUTE

Dedicated to educational excellence and evidence-based care in psychiatry and mental health.

INTRODUCTION TO THE CLINICAL ATTACHMENT

Hands-on training in the assessment and management of patients with mental health

SYMPTOM-BASED HISTORY TAKING

Guided clinical assessment focused on common psychiatric presenting complaints.

Rawalpindi Medical University

Department of Otorhinolaryngology

Integrated Modular Curriculum
4th year MBBS

	Rawalpindi Medical University			
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	Document #: RMU-MR-SOP-59	**Rev. #:** 06	**Issue #:** 01	**Issue Date:** 10-01-2026

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Document Approval

Prepared By	Reviewed By	Approved By
Institute of Psychiatry	Curriculum Committee	Vice Chancellor

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Author(s)	Date	Version	Description
Prof Asad Tamizuddin Nizami HOD Dr Sadia Yasir Assistant Professor	2023-2024	1st	Developed fourth year study guide for MBBS The content for LGIS and learning content for teaching schedule was included
Prof Asad Tamizuddin Nizami HOD **Dr Zona Tahir** Assistant Professor	2025-2026	2nd	Developed fourth year study guide for MBBS The content for LGIS was included. The learning content for the ward teaching has been incorporated.

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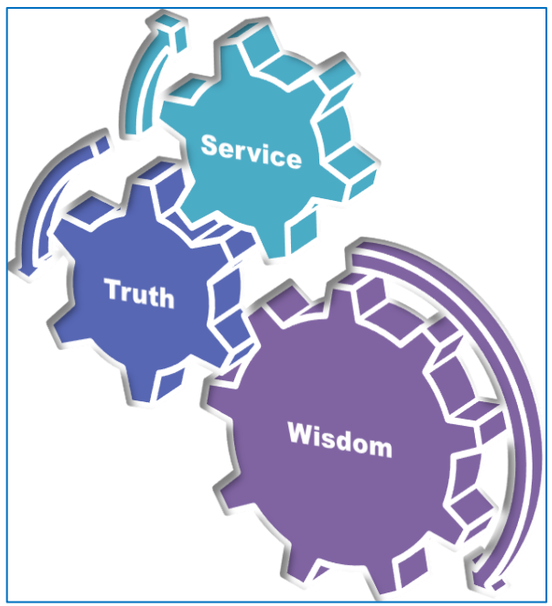
RMU

Motto



Curriculum Mission and Vision

Mission Statement

To impart evidence-based research-oriented health professional education to provide best possible patient care and inculcate the values of mutual respect, ethical practice of healthcare and social accountability.

Vision and Values

Highly recognized and accredited center of excellence in Medical Education, using evidence-based training techniques for development of highly competent health professionals, who are lifelong experiential learner and are socially accountable.

Goals of the Undergraduate Integrated Modular Curriculum

The Undergraduate Integrated Learning Program is geared to provide you with quality medical education in an environment designed to:

- Provide thorough grounding in the basic theoretical concepts underpinning the practice of medicine.
- Develop and polish the skills required for providing medical services at all levels of the health care delivery system.
- Help you attain and maintain the highest possible levels of ethical and professional conduct in your future life.
- Kindle a spirit of inquiry and acquisition of knowledge to help you attain personal and professional growth & excellence.

RMU – 12 Integrated Modular MBBS Curriculum 2026
Isolation to Beyond Boundaries

Figure 1

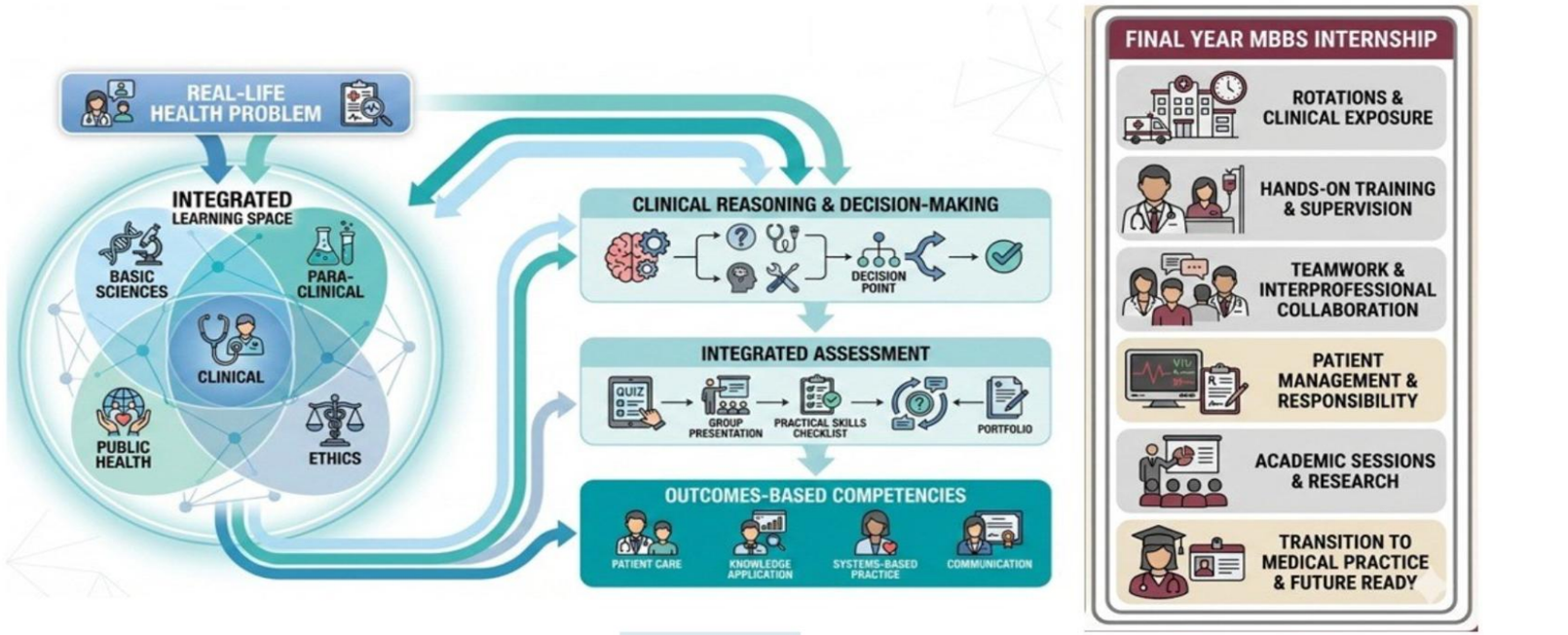
References

Harden RM. The integration ladder: a tool for curriculum planning and evaluation. Medical education. 2000 Jul 1;34(7).

Ten Cate O. Nuts and bolts of entrustable professional activities. Journal of graduate medical education. 2013 Mar 1;5(1):157-8.

Pakistan Medical & Dental Council Guidelines for Undergraduate Medical Education (MBBS) Curriculum – 2024

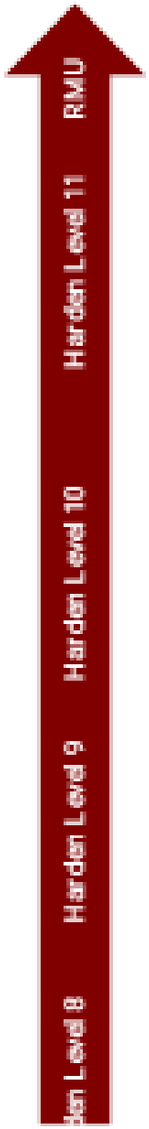
Structured Framework of RMU – 12 Integrated Modular MBBS Curriculum 2026
Isolation to Beyond Boundaries



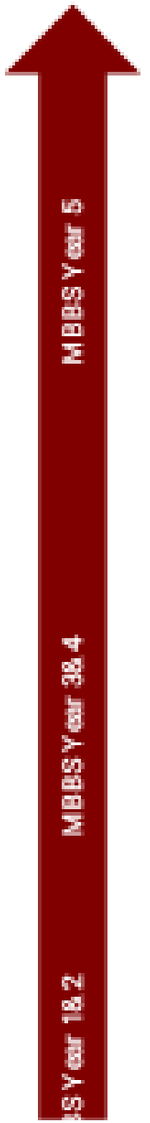
Founadion	The Bridge	The Workplace Entrustment	Embeded Internship
• Pre-clinical sciences • Harden Level 8 (Complementary) MBBS Year (1 & 2)	• Para-clinical sciences • Harden Level 9,10 (Multidiciplinary & Interdiciplinary) MBBS Year (3 & 4)	• Clinical sciences • Harden Level 11 (Transdiciplinary) MBBS Year 5	

Figure 2

Structured Framework of Clinically Oriented Integrated Modular MBBS Curriculum 2026
RMU 12 - Isolation to Internship



Phase	Curricular Highlights
Pre House-job Internship	**Undergraduate Internship** The Pre House-Job Internship is a structured, supervised transition phase that consolidates clinical skills and professional readiness before the statutory house job. Learning is workplace-based and centred on clearly defined Entrustable Professional Activities aligned with international standards. Assessment relies on programmatic workplace-based tools and entrustment decisions to ensure safe, consistent performance and smoother transition into supervised clinical practice.
Clinical Sciences The Workplace Entrustment	**Transdisciplinary** Clinical education is embedded within real patient care and organised around EPAs and graded responsibility. Students learn as supervised members of clinical teams. Assessment is workplace-based and progression is guided by entrustment decisions supported by portfolios.
Paraclinical Sciences The Bridge	**Multidisciplinary and Interdisciplinary** Pre-clinical sciences are organised around clinical problems and system themes with interdisciplinary learning outcomes and team-based teaching. Instruction uses case-based learning, simulation and integrated laboratories to promote cross-disciplinary reasoning, while advanced units introduce task-based competencies and EPAs using a spiral design. Assessment emphasises integrated performance through OSCEs, workplace-linked tools and portfolios, with progression informed by aggregated evidence rather than single examinations.
Pre-Clinical The Foundation	**Complementary** Basic Medical Sciences are organized into system and theme-based modules with coordinated teaching across disciplines. Subject teaching is aligned through module-level outcomes and planned integrated sessions that reinforce related concepts. Assessments include items to test applied understanding, supported by interdisciplinary planning to ensure coherence.



Rawalpindi Medical University has adopted a staged curricular framework that reflects a progressive movement along Harden's integration ladder, culminating in going beyond the ladder to RMU Integration level 12. The curriculum is designed to ensure that knowledge acquired in the early years is not isolated or terminal, but is progressively contextualized, applied and transformed into professional competence. This progression is achieved by aligning curricular structure, teaching approaches and assessment strategies so that students move from conceptual understanding to integrated reasoning and finally to authentic clinical performance with graded responsibility.

Phase 1- The Foundation

In the early phase, basic sciences are organised using a complementary approach. The curriculum is structured into system- and theme-based modules rather than isolated subject courses, allowing Anatomy, Physiology, Biochemistry and related disciplines to retain their academic identity while contributing in a coordinated and mutually reinforcing manner. Learning outcomes are written at the module level and are intentionally framed to reflect conceptual understanding of systems rather than discipline-specific factual recall alone. Teaching is primarily discipline-led, but content delivery is carefully sequenced so that related concepts across subjects are taught in close temporal proximity. This sequencing is reinforced through planned integrated multidisciplinary activities such as problem-based learning, case-based learning and joint sessions that require students to draw connections across disciplines. Teaching methods extend beyond lectures to include small-group discussions with structured clinical problem triggers that encourage early application of knowledge. Assessment in this phase is knowledge-focused, but incorporates integrated items and short clinical vignettes to test applied understanding (C4 level) across disciplines. These integrated assessment elements are deliberately introduced to prepare students for more complex synthesis (C6 level) in later phases, while maintaining the reliability. Regular interdisciplinary planning meetings and module coordination ensure coherence, avoid unnecessary duplication and maintain alignment between teaching and assessment.

Phase 2- The Bridge

As students enter the pre-clinical phase, the curriculum transitions into a multidisciplinary and subsequently interdisciplinary design. At this stage, curricular organisation shifts more clearly towards clinical systems and patient presentations, and learning outcomes emphasise the integration of knowledge, skills and reasoning across disciplines. Rather than subjects contributing independently, departments collaborate in the design and delivery of modules, and students encounter learning experiences that require simultaneous application of concepts from multiple domains. Teaching is increasingly delivered through team-based and co-facilitated sessions, with clinicians and basic scientists jointly guiding learning activities. Case-based learning, integrated practical sessions and simulation-based teaching become central modalities, allowing students to engage with clinically meaningful problems while still grounded in scientific principles. The curriculum adopts a spiral structure in which key concepts are revisited at increasing levels of complexity, enabling deeper understanding

and clinical relevance. In advanced pre-clinical components, the curriculum becomes explicitly task-oriented, focusing on common clinical presentations and professional activities rather than disciplinary content. At this stage, portfolios are introduced to support longitudinal documentation of learning, and early forms of workplace-linked assessment and Entrustable activities are incorporated to familiarize students with performance-based expectations. Assessment strategies emphasize synthesis and reasoning, using integrated written examinations, complex case vignettes, OSCEs and structured simulation assessments. Decisions about student progress increasingly rely on aggregated evidence from multiple assessment tools and research projects.

Phase 3- The Workplace Entrustment

In the clinical phase, the curriculum becomes fully transdisciplinary, with learning embedded within authentic patient care and professional practice. Educational activities are organised around real clinical tasks, patient care pathways and Entrustable Professional Activities that reflect the core responsibilities of a graduating doctor. Students are integrated into clinical teams and participate in patient care under supervision, progressively assuming greater responsibility as competence is demonstrated. Teaching is predominantly workplace- based, supported by bedside teaching, coaching, reflective practice and targeted simulation for complex or high-risk activities. The distinction between disciplines becomes secondary to the holistic management of patients, as students are expected to integrate biomedical knowledge, clinical skills, communication, professionalism and teamwork in real settings. Assessment is programmatic and centered on performance in the workplace, using tools such as mini-CEX, DOPS, case-based discussions and multisource feedback. Evidence from these assessments is collected longitudinally within portfolios and reviewed by entrustment or competence committees to make informed decisions about progression and readiness for practice. Summative judgment is therefore based on sustained performance over time. Faculty roles evolve from subject teachers to supervisors, assessors and coaches, with explicit responsibility for observation, feedback and entrustment decisions. Diverse clinical exposure in tertiary public sector hospitals and community settings ensure adequate exposure, supervision and assessment opportunities, while quality assurance processes focus on the validity and consistency of entrustment decisions and learning experiences.

Phase 4- The Undergraduate Internship

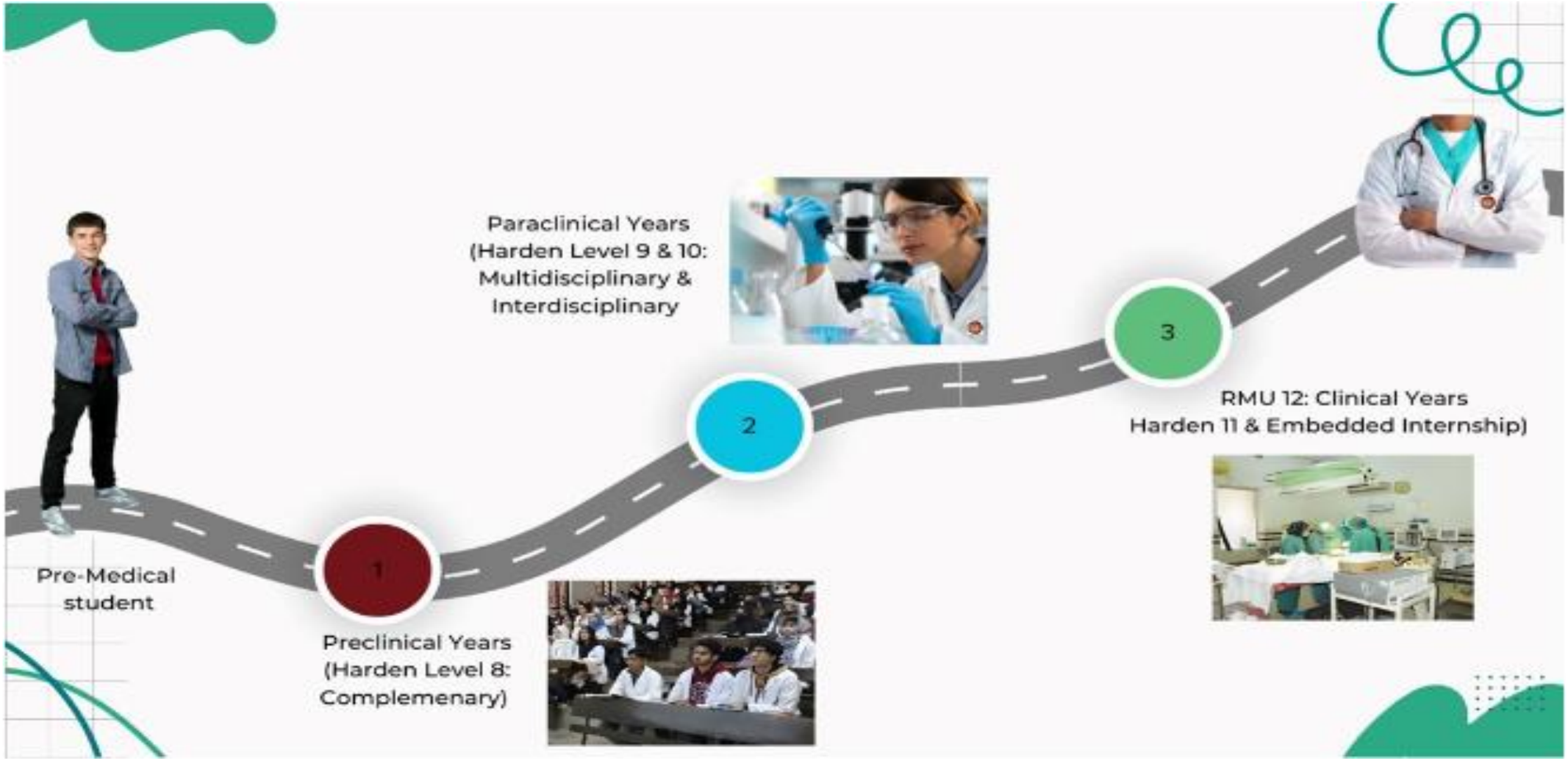
The Undergraduate Internship is a structured, supervised transition phase designed to consolidate clinical competence and ensure readiness for the statutory house job. It provides learners with protected, workplace-based exposure focused on authentic patient care tasks, guided by clearly defined Entrustable Professional Activities aligned with international standards. Teaching emphasizes supervised clinical practice, simulation for high-risk scenarios, and interprofessional teamwork, while assessment uses programmatic workplace-based tools, portfolios and entrustment decisions to judge safe, consistent performance. This level strengthens patient safety, reduces transition shock, and ensures that graduates enter the house job with demonstrable, documented readiness for independent supervised practice.

Across all phases, the curriculum is underpinned by faculty development and continuous quality assurance. The staged movement from complementary through multidisciplinary and interdisciplinary learning to transdisciplinary clinical practice ensures that graduates are not only knowledgeable, but also capable of applying their

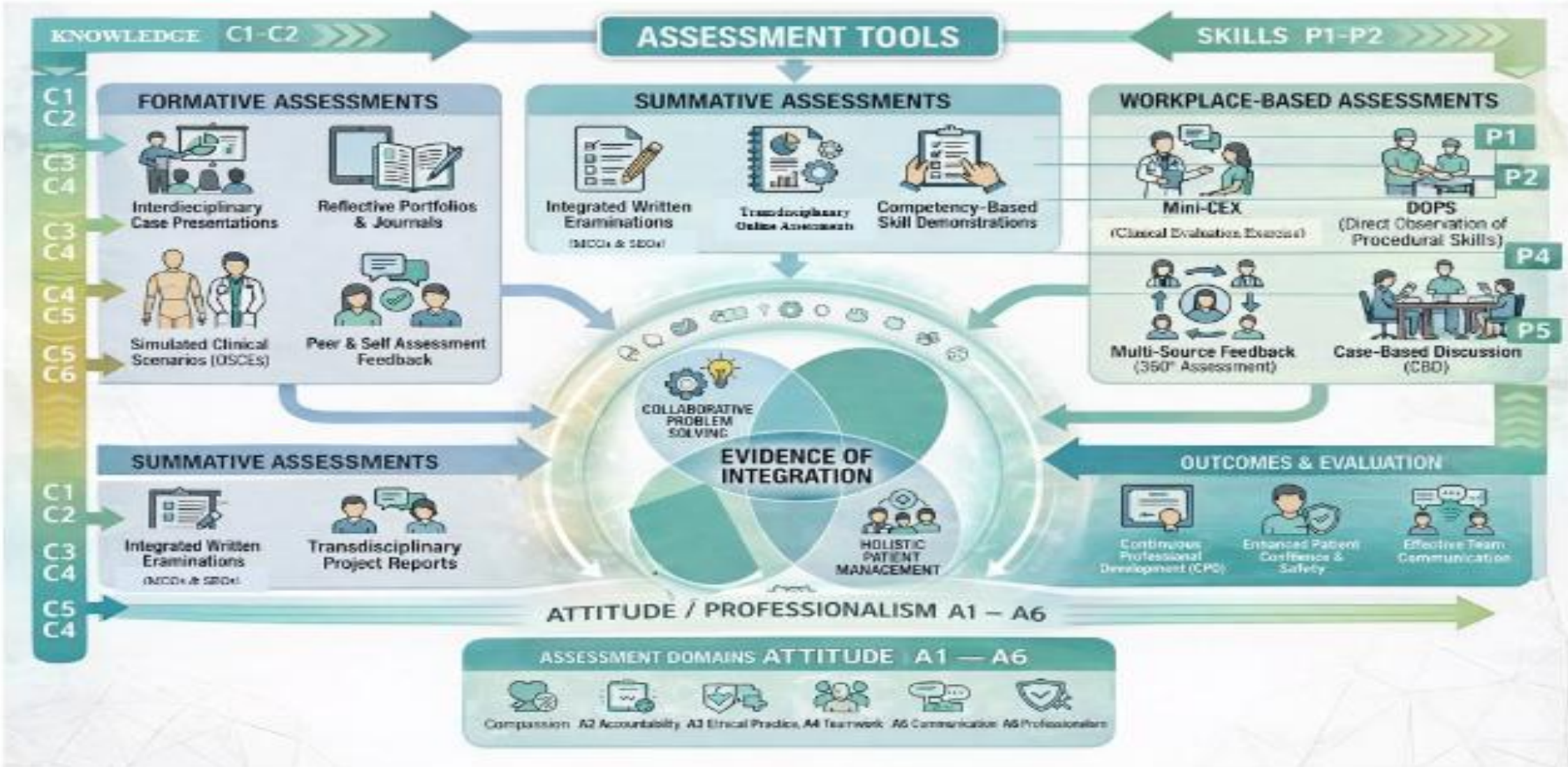
learning effectively and safely in real clinical environments. This integrated and progressive design reflects contemporary best practices in medical education and aligns the educational experience with the expectations of modern healthcare systems.

Structured Framework of RMU – 12 Integrated Modular MBBS Curriculum 2026

Isolation to Beyond Boundaries



Assessment Framework of RMU – 12 Integrated Modular MBBS Curriculum 2026 Isolation to Beyond Boundaries


KNOWLEDGE C1-C2
ASSESSMENT TOOLS
SKILLS P1-P2
C1
C2
C3
C4
C3
C4
C4
C5
C5
C6
FORMATIVE ASSESSMENTS
Interdisciplinary Case Presentations
Reflective Portfolios & Journals
Simulated Clinical Scenarios (OSCEs)
Peer & Self Assessment Feedback
SUMMATIVE ASSESSMENTS
Integrated Written Examinations
Competency-Based Skill Demonstrations
WORKPLACE-BASED ASSESSMENTS
P1
P2
Mini-CEX
DOPS
(Direct Observation of Procedural Skills)
P4
Multi-Source Feedback
(360° Assessment)
Case-Based Discussion
(CBD)
P5
COLLABORATIVE PROBLEM SOLVING
EVIDENCE OF INTEGRATION
HOLISTIC PATIENT MANAGEMENT
SUMMATIVE ASSESSMENTS
C1
C2
C3
C4
C5
C4
Integrated Written Examinations
Transdisciplinary Project Reports
OUTCOMES & EVALUATION
Continuous Professional Development (CPD)
Enhanced Patient Confidence & Safety
Effective Team Communication
ATTITUDE / PROFESSIONALISM A1 – A6
ASSESSMENT DOMAINS ATTITUDE A1 — A6
Compassion
A2 Accountability
A3 Ethical Practice
A4 Teamwork
A5 Communication
A6 Professionalism

RMU Level 12 Trans-Contextual Integration Framework

Introduction

Modern medical education emphasizes integration as a cornerstone for producing competent, reflective, and patient-centered physicians. Harden's Integration Ladder provides a structured framework to assess the degree of integration within a medical curriculum, ranging from isolated teaching (Level 1) to full transdisciplinary integration (Level 11). Rawalpindi Medical University (RMU), through its MBBS curriculum design, teaching strategies, and assessment framework, demonstrates clear alignment with PMDC's undergraduate medical education standards and fulfills the criteria for Level 11 on Harden's Integration Ladder and even beyond boundaries corresponding to ***RMU Level 12 Integration***. Furthermore, RMU's curriculum promotes higher-order thinking skills as defined by Bloom's Taxonomy, thereby extending beyond mere integration to the development of competent, reflective, and adaptive physicians.

Rawalpindi Medical University in the Context of Harden's Integration Ladder: Level 11 and Beyond Boundaries

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Rawalpindi Medical University (RMU), through its undergraduate MBBS curriculum and evolving educational strategies, demonstrates characteristics that place it at Level 11 of Harden's Ladder and, in several aspects, even beyond that RMU Level 12(beyond boundaries/internship). This is evident in RMU's holistic curriculum design, clinical immersion, problem-based learning, community-oriented education, and outcome-driven assessment strategies.

Key Highlights

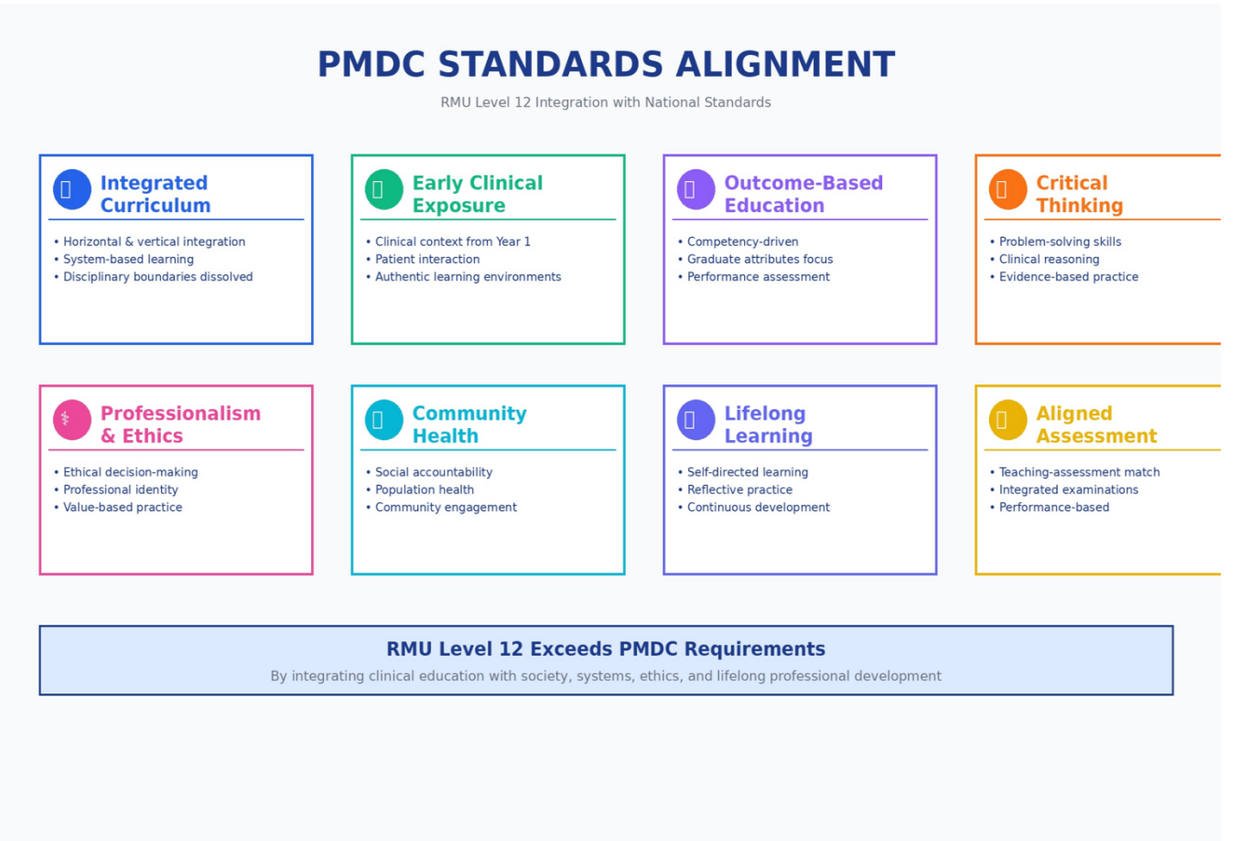
- Transcends Harden's Level 11 through integration with society, systems, ethics, and lifelong learning
- Fully aligned with PMDC undergraduate medical education standards
- Emphasizes higher-order thinking: Analysis, Evaluation, and Creation (Bloom's Taxonomy)
- Produces socially accountable, adaptive physicians prepared for 21st-century healthcare challenges

1. Foundations of Integration

1.1 PMDC Standards for Medical Education

The Pakistan Medical and Dental Council mandates a transformative approach to undergraduate medical education characterized by:

- **Integrated Curriculum:** Horizontal integration (across disciplines) and vertical integration (across years)
- **Early Clinical Relevance:** Clinical context introduced from initial years
- **Outcome-Based Education:** Focus on graduate competencies rather than content coverage
- **Critical Thinking & Problem-Solving:** Development of analytical and evaluative skills
- **Professionalism & Ethics:** Embedded throughout the curriculum, not as isolated modules
- **Alignment of Teaching, Learning, and Assessment:** Constructive alignment with graduate outcomes



1.2 Harden's Integration Ladder: Overview

Harden's Integration Ladder provides a systematic framework for evaluating curricular integration, progressing through 11 levels:

HARDEN'S INTEGRATION LADDER → RMU BEYOND BOUNDARIES

2. RMU Level 12—Beyond Boundaries

2.1 Conceptual Definition

RMU Level 12: Beyond Boundaries Integration

A curriculum in which learning is organized not merely around disciplines or clinical problems, but around real-world health systems, societal needs, ethical complexity, population health challenges, and professional identity formation—producing graduates who can adapt, lead, and innovate across contexts.

2.2 Why Level 12 Exists

While Harden's Integration Ladder culminates at Level 11 (Transdisciplinary Integration), contemporary medical education—particularly as mandated by PMDC—requires graduates who can function beyond the clinical encounter. RMU operates beyond transdisciplinary clinical integration by:

- Shifting the unit of integration from the patient alone to the patient embedded within society, systems, ethics, and professional identity
- Addressing health systems, governance, and resource allocation as integral learning domains
- Embedding knowledge creation and research literacy, not just knowledge synthesis
- Structuring lifelong learning and adaptive professionalism as explicit outcomes

2.3 Five Pillars of Level 12 Integration

A. Societal Integration: Patient-in-Society Problems

Level 11: Patient-centered clinical problems

RMU Level 12: Patient-in-society problems

RMU Implementation:

- Community-based medical education

- Analysis of social determinants of health
- Preventive and promotive healthcare strategies
- Health equity considerations in clinical decision-making

Students don't merely diagnose disease—they analyze population patterns and design interventions, requiring evaluation and creation (Bloom's highest levels).

B. Value-Based Integration: Contextual Ethics

Level 11: Ethics integrated within cases

RMU Level 12: Ethics embedded longitudinally in real decisions

RMU Implementation:

- Ethical dilemmas arising from real patient encounters, not hypothetical scenarios
- Continuous professional identity formation throughout the curriculum
- Assessment of reflective practice and ethical reasoning

Students must weigh competing values, manage uncertainty, and justify actions—hallmarks of evaluation-level cognition.

C. System-Level Integration: Healthcare Systems & Leadership

Level 11: Focus on individual patient care

RMU Level 12: Focus on healthcare systems and governance

RMU Implementation:

- Exposure to health systems functioning and policy implications
- Understanding resource allocation realities

- Leadership and teamwork competencies

Students evaluate trade-offs between individual benefit and population good—something no single discipline or clinical problem can teach.

D. Knowledge Creation: Beyond Synthesis

Level 11: Knowledge synthesis

RMU Level 12: Knowledge generation

RMU Implementation:

- Research literacy and critical appraisal skills
- Clinical audits and community health projects
- Evidence-based practice and innovation

Students formulate research questions, design solutions, and create outputs—aligning with the creation level of Bloom's Taxonomy.

E. Temporal Integration: Lifelong Professional Identity

Level 11: Competent graduate

RMU Level 12: Adaptive professional

RMU Implementation:

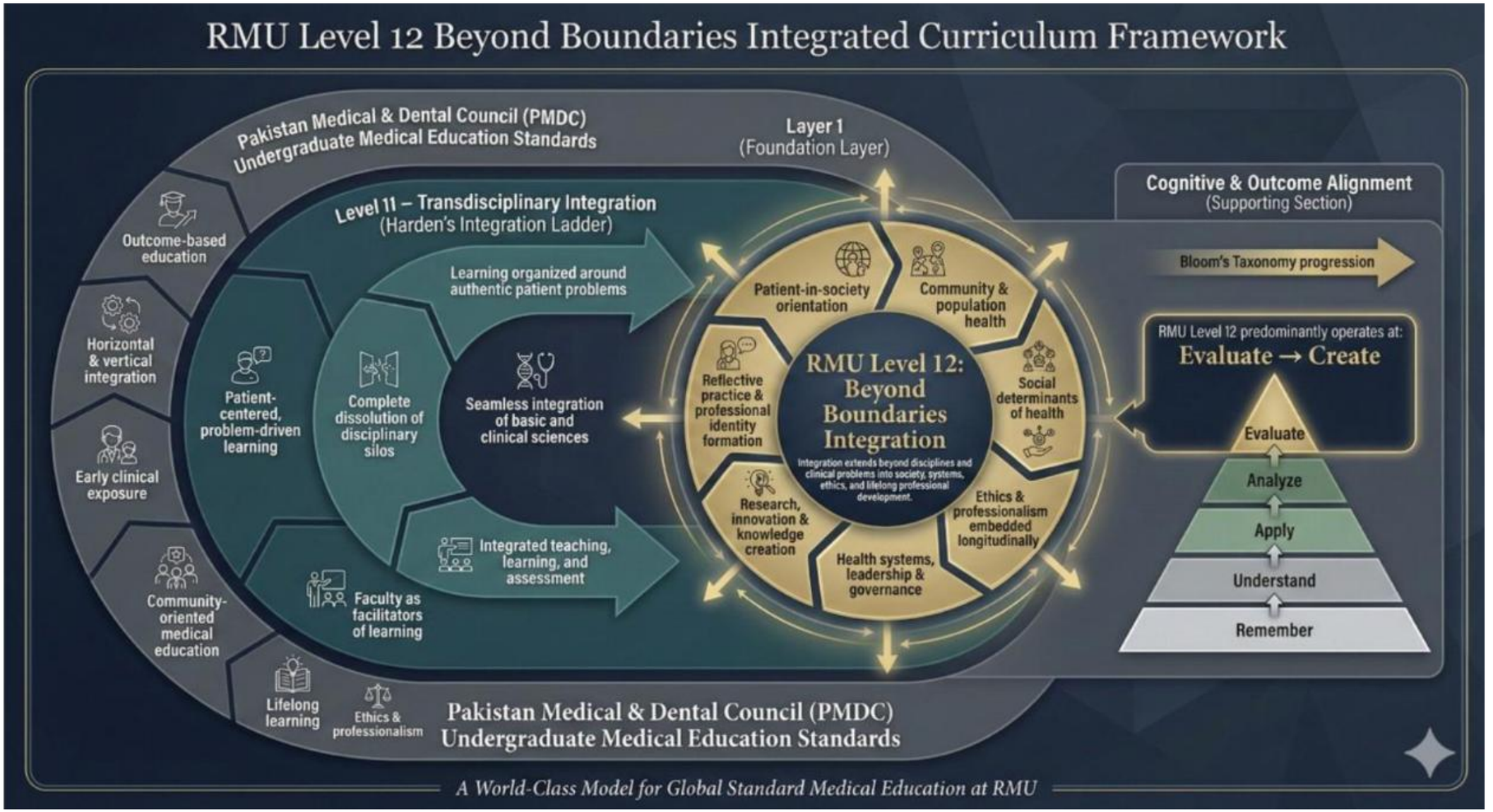
- Reflective portfolios documenting professional growth
- Self-directed learning plans
- Feedback-driven continuous improvement

Graduates leave with the ability to identify learning needs and adapt to new contexts—temporal integration across undergraduate education and professional life.

3. Alignment with PMDC Standards

The following table demonstrates explicit mapping between PMDC graduate competencies, RMU curriculum implementation, and justification for Level 12 integration:

PMDC Competency	RMU Implementation	Level 12 Justification
Medical Knowledge	Integrated system-based modules combining anatomy, physiology, pathology, pharmacology, radiology, and clinical medicine	Knowledge constructed through real patient problems; subject boundaries dissolved
Clinical Skills & Patient Care	Early clinical exposure, bedside teaching, skills labs, OSCEs	Skills and knowledge learned simultaneously in authentic clinical contexts
Clinical Reasoning	Case-based learning, problem-based tutorials, integrated examinations	Learning organized around clinical problems requiring synthesis beyond single disciplines
Communication Skills	Longitudinal communication training embedded in OSCEs and ward teaching	Communication competencies embedded within patient encounters, not isolated modules
Professionalism & Ethics	Longitudinal professionalism themes, ethics discussions during clinical rotations	**Ethical reasoning contextualized within patient care—extends to value-based integration**
Community & Preventive Health	Community-based medical education, public health projects, outreach programs	**Integrates clinical medicine with population health and social determinants—societal integration**
Lifelong Learning	Reflective practice, research literacy, self-directed learning tasks	**Students identify learning needs from clinical encounters—temporal integration**


RMU Level 12 Beyond Boundaries Integrated Curriculum Framework
Pakistan Medical & Dental Council (PMDC)
Undergraduate Medical Education Standards
Outcome-based education
Horizontal & vertical integration
Early clinical exposure
Community-oriented medical education
Lifelong learning
Ethics & professionalism
Level 11 – Transdisciplinary Integration
(Harden's Integration Ladder)
Patient-centered, problem-driven learning
Complete dissolution of disciplinary silos
Learning organized around authentic patient problems
Seamless integration of basic and clinical sciences
Integrated teaching, learning, and assessment
Faculty as facilitators of learning
Layer 1
(Foundation Layer)
Patient-in-society orientation
Community & population health
Social determinants of health
Ethics & professionalism embedded longitudinally
Health systems, leadership & governance
Research, innovation & knowledge creation
Reflective practice & professional identity formation
RMU Level 12: Beyond Boundaries Integration
Integration extends beyond disciplines and clinical problems into society, systems, ethics, and lifelong professional development.
Cognitive & Outcome Alignment
(Supporting Section)
Bloom's Taxonomy progression
RMU Level 12 predominantly operates at:
Evaluate → Create
Evaluate
Analyze
Apply
Understand
Remember
Pakistan Medical & Dental Council (PMDC)
Undergraduate Medical Education Standards
A World-Class Model for Global Standard Medical Education at RMU

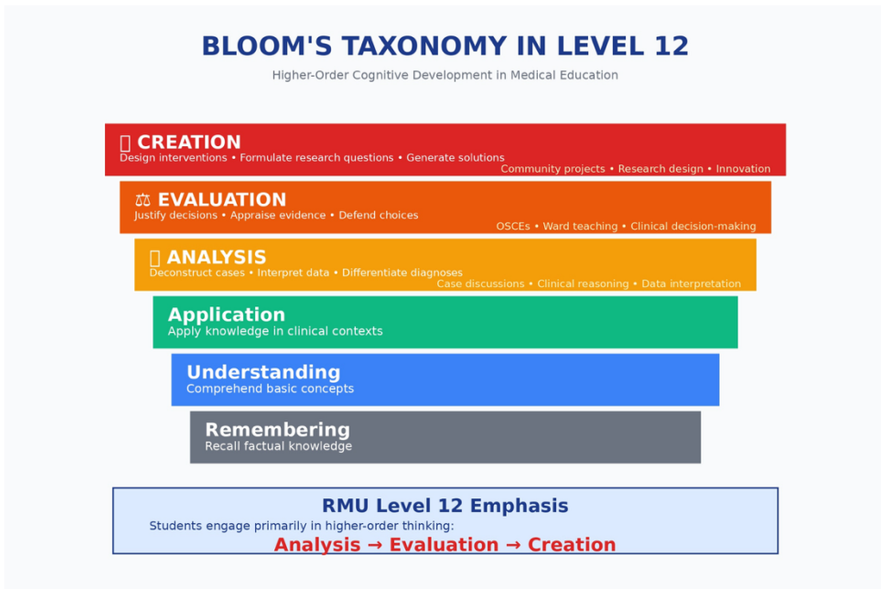
4. Bloom's Taxonomy & Higher-Order Thinking

RMU's curriculum explicitly targets higher-order cognitive domains of Bloom's Taxonomy:

- **Analysis:** Breaking down complex clinical cases, interpreting investigations, differentiating diagnoses
- **Evaluation:** Appraising evidence, justifying management decisions, defending clinical choices
- **Creation:** Designing interventions, formulating research questions, developing solution

4.1 Learning Activities Mapped to Bloom's Levels

Learning Activity	Bloom's Level	Justification
Integrated case-based discussions	**Analysis**	Students deconstruct complex cases, interpret investigations, differentiate diagnoses
Ward-based clinical teaching	**Analysis → Evaluation**	Learners appraise patient data and justify management decisions in real time
OSCEs and scenario-based stations	**Evaluation**	Students defend clinical decisions, prioritize care, demonstrate judgment under pressure
Community health projects	**Evaluation → Creation**	Learners assess community needs and design context-specific preventive interventions
Research projects & clinical audits	**Creation**	Students formulate questions, design studies, generate new knowledge



GRADUATE OUTCOMES

Level 12 Integration Produces Adaptive Professionals

CORE COMPETENCIES

Clinical Excellence
- Evidence-based practice
- Diagnostic reasoning
- Patient safety

Professionalism
- Ethical decision-making
- Patient-centered care
- Accountability

Communication
- Effective patient interaction
- Interprofessional collaboration
- Cultural competence

Population Health
- Community engagement
- Preventive focus
- Health promotion

ADAPTIVE CAPABILITIES

Systems Thinking
- Health systems understanding
- Policy awareness
- Resource management

Research Literacy
- Critical appraisal
- Knowledge generation
- Evidence synthesis

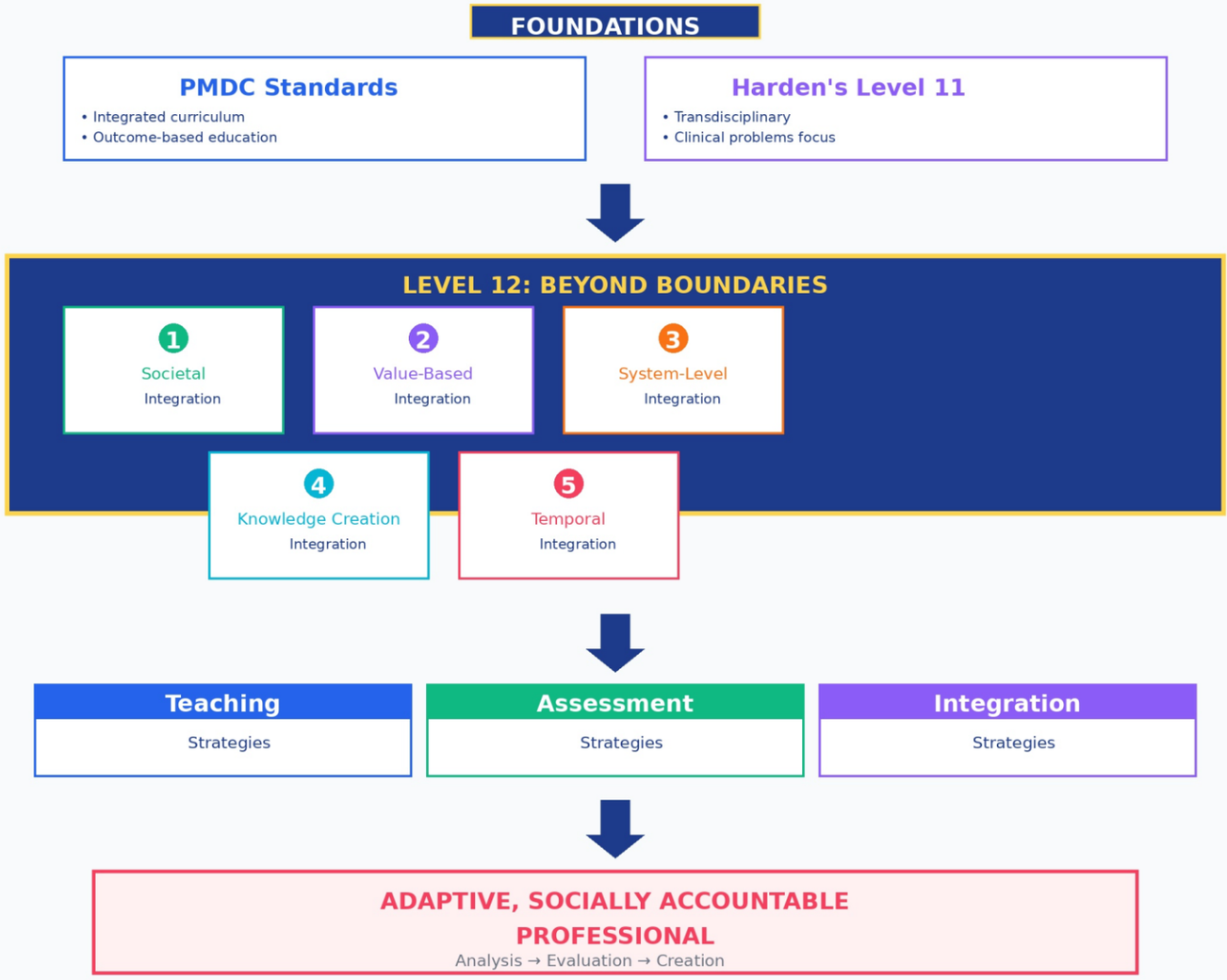
Lifelong Learning
- Self-directed growth
- Reflective practice
- Adaptive expertise

Leadership
- Innovation
- Change management
- Team development

ADAPTIVE, SOCIALLY ACCOUNTABLE PROFESSIONAL

RMU LEVEL 12 FRAMEWORK

Complete Conceptual Flow



Conclusion

Rawalpindi Medical University's curriculum exemplifies a transformational approach to medical education that extends beyond traditional disciplinary integration. By achieving **Level 12: Beyond Boundaries Integration**, RMU demonstrates that modern medical education must prepare graduates not only as competent clinicians but as adaptive, reflective, socially accountable professionals capable of navigating complex health systems, ethical dilemmas, and evolving healthcare landscapes.

This framework, fully aligned with PMDC standards and grounded in Bloom's higher-order cognitive domains, positions RMU as an innovator in outcome-based, student-centered medical education that produces physicians prepared for 21st-century healthcare challenges.

The Five Pillars of Level 12—Societal Integration, Value-Based Integration, System-Level Integration, Knowledge Creation, and Temporal Integration—collectively represent a holistic vision for medical education that transcends disciplinary boundaries and prepares graduates for lifelong professional excellence.

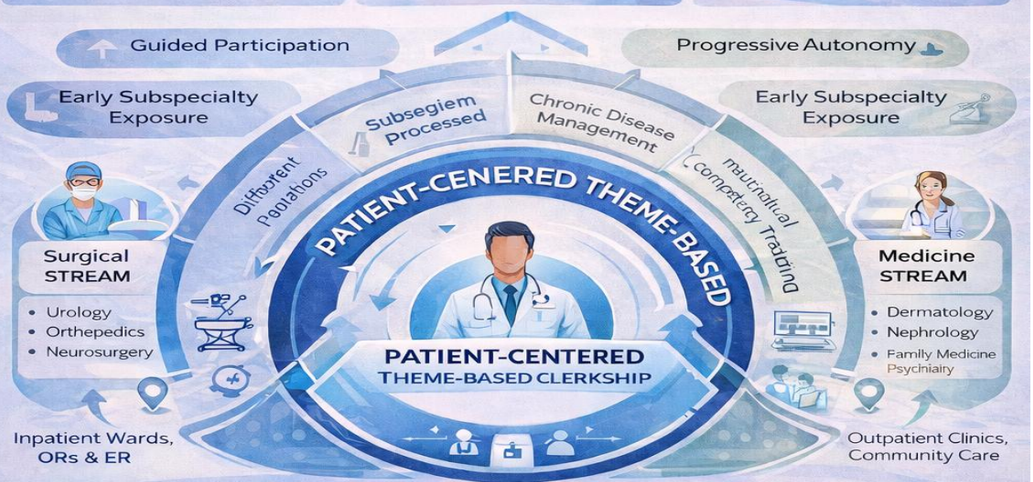
Key Takeaways for Educators

- Level 12 integration is achievable through deliberate curriculum design aligned with regulatory standards
- Higher-order thinking (Analysis, Evaluation, Creation) must be explicitly embedded in learning activities
- Integration extends beyond clinical problems to encompass society, systems, ethics, and professional identity
- Assessment strategies must align with transdisciplinary learning objectives
- The ultimate goal is producing adaptive professionals, not merely competent graduates

4TH YEAR MBBS CLINICAL CLERKSHIP
RAWALPINDI MEDICAL UNIVERSITY
(LEVEL 12 EMBEDDED CLINICAL TRAINING)

PATIENT-CENTERED THEME-BASED CLERKSHIP
LEVEL 12 EMBEDDED CLINICAL TRAINING)

- Competency-Based Education
- Interdisciplinary Integration Experiential Immersion
- Interdisciplinary Immersion
- Continuous Assessment Tracking
- Continuous Assessment Tracking
- Reflective Lifelong Learning



LEVEL 12 "EMBEDDED" CLERKSHIP MODEL

- Sustained Clinical Participation
- Authentic Case Exposure
- 40% Continuous Internal Assessment
- Strong Supervisor Mentorship
- Clinical skills performance
- Competency Mapping & Portfolios

COMPETENT 4th YEAR CLINICAL CLERKS

Upon completion of the 4th Year Clerkship, students will be able to achieve:

- ✔ Focused Clinical Examinations
- ✔ Differential Diagnoss Formulation
- ✔ Safe Procedural Skills
- ✔ Compilaing Managenent
- ✔ Differential Diagnosis Formulation
- ✔ Multidisciplinary Management
- ✔ Ethical Communication
- ✔ Reflective clinical Judgment

Clinical Clerkship

Rawalpindi Medical University

Level 12 Embedded Clerkship Model

(Theme-Based Integrated Clinical Training)

1. Program Overview

The 4th Year MBBS Clinical Clerkship at Rawalpindi Medical University (RMU) is designed as a structured, competency-driven, Level 12 embedded clinical training model.

At this stage, students transition from supervised academic learners to progressively independent clinical participants. The program emphasizes immersive patient care exposure, deliberate practice, interdisciplinary integration, reflective learning, and longitudinal competency tracking.

Unlike traditional block rotations that isolate disciplines, RMU adopts a **theme-based embedded structure**, where allied specialties are integrated within broader clinical streams. This ensures continuity in clinical reasoning, patient care responsibility, and professional identity formation.

The clerkship prioritizes:

- Authentic clinical participation
- Early subspecialty exposure
- Competency-based progression
- Structured formative feedback
- Reflective practice
- Continuous internal assessment
- Longitudinal skill development

Students are expected to function as active members of clinical teams rather than passive observers.

2. Educational Philosophy

The RMU Level 12 Embedded Clerkship is grounded in:

- Competency-Based Medical Education (CBME)
- Experiential learning through clinical immersion
- Progressive scaffolding of autonomy
- Continuous formative assessment
- Reflective and self-directed learning
- Interdisciplinary integration
- Patient-centered professionalism

Clinical learning is organized around **patient presentations and themes**, not isolated subject boundaries. Students develop clinical reasoning across systems rather than within silos.

3. Theme-Based Integrated Structure

The clerkship is organized into **integrated clinical themes** embedded within two major streams:

3.1 Surgical Stream (Allied Rotations – 2 Weeks Each)

Themes emphasize procedural exposure, surgical reasoning, and perioperative care.

Specialties include:

- Urology
- Orthopedics
- Neurosurgery

Students experience:

- Acute surgical presentations
- Trauma and emergency care
- Operative indications
- Post-operative monitoring
- Procedural skill development under supervision

3.2 Medicine Stream (Allied Rotations – 1 Week Each)

Themes emphasize chronic disease management, systemic evaluation, and community-based care.

Specialties include:

- Dermatology
- Nephrology
- Family Medicine
- Psychiatry (3 weeks integrated exposure)

Students engage in:

- Outpatient clinics
- Ward rounds
- Multidisciplinary discussions
- Community and psychosocial assessments
- Longitudinal patient follow-up

The theme-based structure ensures exposure to:

- Acute conditions
- Chronic diseases
- Surgical decision-making

- Medical management
- Community care
- Mental health integration

4. Core Learning Outcomes (Level 12 Competency Expectations)

Upon completion of the 4th Year Clerkship, students will be able to:

1. Conduct focused clinical history and examination across subspecialties
2. Perform selected procedural skills safely under supervision
3. Formulate prioritized differential diagnoses
4. Develop rational investigation plans
5. Participate in multidisciplinary case discussions
6. Communicate effectively with patients and healthcare teams
7. Apply ethical and professional standards consistently
8. Demonstrate reflective clinical learning
9. Show emerging independent clinical judgment

These outcomes align with Level 12 expectations of embedded participation and progressive autonomy.

5. Assessment Model – 40% Continuous Internal Assessment (CIA)

RMU distinguishes itself through a robust Continuous Internal Assessment system.

CIA Structure:

- **30% Theory & Clinical Assessments**
- **10% LMS-based assessments**

CIA evaluates:

- Clinical skills performance
- Case presentations
- Bedside participation
- Procedural competence
- Professionalism
- Logbook completion
- Reflective portfolio entries
- Mini-CEX and DOPS
- Supervisor feedback

Continuous assessment ensures:

- Sustained engagement
- Real-time feedback
- Early identification of learning gaps
- Remediation opportunities
- Skill consolidation over time

Competence is evaluated longitudinally rather than through a single high-stakes examination.

6. Progressive Scaffolding of Autonomy

The Level 12 clerkship follows a structured autonomy model:

Stage 1 — Guided Participation

Students observe and assist in patient care.

Stage 2 — Supervised Performance

Students perform clinical tasks with structured faculty oversight.

Stage 3 — Supported Independence

Students lead patient encounters with supervision available.

Each rotation increases responsibility while maintaining safety and accountability.

This scaffolding:

- Builds confidence
- Reduces cognitive overload
- Encourages reflective learning
- Reinforces mastery through repetition
- Develops clinical judgment

Competence emerges through repeated exposure, structured feedback, and deliberate practice.

7. Level 12 Embedded Clerkship Model

The RMU Level 12 model integrates:

- Vertical curriculum alignment
- Interdisciplinary collaboration
- Competency mapping
- Longitudinal evaluation
- Reflective learning cycles

Students follow patients across services, linking classroom knowledge to real clinical decision-making.

This embedded design:

- Prevents fragmented learning

- Promotes continuity of care understanding
- Encourages systems thinking
- Strengthens teamwork skills
- Supports professional identity formation

Students learn not only clinical content but also how to function within healthcare systems.

8. Development of Self-Directed Lifelong Learners

The clerkship intentionally cultivates:

- Self-assessment skills
- Adaptive expertise
- Curiosity-driven inquiry
- Evidence-based reasoning
- Professional resilience

Students maintain portfolios, set learning goals, and engage in guided reflection.

They learn to:

- Identify personal knowledge gaps
- Seek evidence independently
- Critically appraise information
- Update clinical reasoning continuously

The goal is transformation from exam-focused learners into evolving, self-sustaining professionals.

9. Distinctive Features of the RMU Level 12 Model

Compared to traditional clerkship systems, RMU stands out by:

- Early subspecialty integration
- Embedded participation within clinical teams
- Strong 40% continuous internal assessment
- Structured scaffolding of independence
- Longitudinal competency tracking
- Emphasis on reflective growth
- Alignment with national and international competency frameworks

The outcome is a graduate who is:

- Clinically competent
- Adaptable
- Ethical
- Reflective
- Team-oriented
- Prepared for increasing responsibility in final year and house job

Psychiatry Block-1 Team

Block Name : **Psychiatry Block-1 (Module I-II)**
Duration of module : **02 Weeks each module**

Block Committee			Block Task Force Team		
1.	Vice Chancellor RMU	Prof. Dr. Muhammad Umar	1	Coordinator	Dr. Zona Tahir
			2	Co-Coordinator	Dr Kainat Kareem Mirza, Dr Sehar Khan
2.	Director DME	Prof. Dr. Rai Muhammad Asghar	3	DME Focal Person	Dr. Maryum Batool
3.	Convener Curriculum	Prof. Dr. Naeem Akhter			
4.	Dean Medicine	Prof. Dr. Khurram			
5.	Additional Director DME	Prof. Dr. Ifra Saeed			
6.	Chairperson Psychiatry	Prof Asad Tamizuddin Nizami			
7.	Chairperson Community Medicine	Associate Prof Dr Khola		**DME Implementation Team**	
			1.	Director DME	Prof. Dr. Rai Muhammad Asghar
8.	Focal Person Psychiatry	Dr Zona Tahir	2.	Add. Director DME	Prof. Dr. Ifra Saeed
			3.	Deputy Director DME	Dr Shazia Zaib
			4.	Module planner & Implementation Coordinator	Dr. Omaima Asif
			5.	Editor	Dr Omaima Asif

Preamble

This curriculum is according to the standards set by following organizations.

1. Foundation for Advancement of International Medical Education and Research (FAIMER)
2. Accreditation Council for Graduate Medical Education (ACGME)
3. World Federation for Medical Education (WFME)
4. Undergraduate Education Policy 2023 from Higher Education Commission (HEC)
5. Pakistan Medical and Dental Council (PMDC) guidelines for undergraduate Medical Education Curriculum (MBBS) 2022

It is based on **SPICES** model of educational strategies which is student centered, problem based, integrated, community oriented and systematic. *

Teacher centered	□	Student centered	S
Information oriented	□	Problem based	P
Discipline based	□	Integrated	I
Hospital based	□	Community based	C
Standardized curriculum	□	Elective programs	E
Opportunistic	□	Systematic	S

*Harden, R. M., Sowden, S., & Dunn, W. R. (1984). Educational strategies in curriculum development: The SPICES model. Medical Education, 18, 284-297. http://dx.doi.org/10.1111/j.1365-2923.1984.tb01024.x

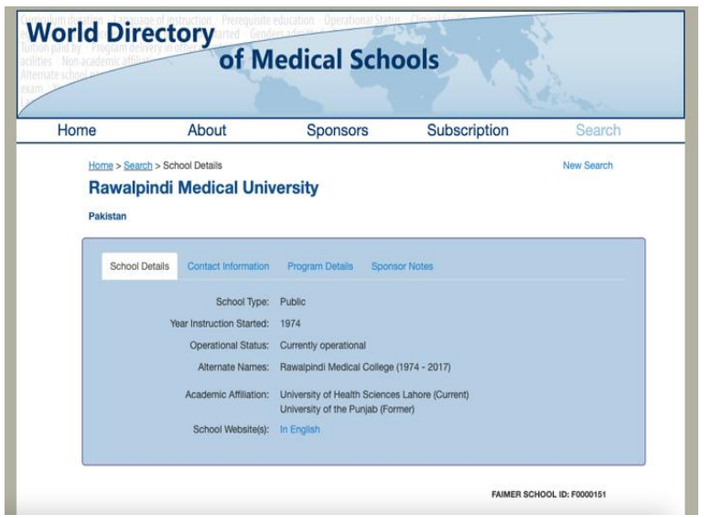
Reference Documents

FAIMER™
A Division of Intealth

Foundation for Advancement of International Medical Education and Research

https://search.wdoms.org/?_gl=1*b2ddww*_ga*MTQyNTAwNzIxMi4xNzA2ODEwNjcx*_ga_R5BJZG5EYE*MTcwNjgzNjg3Ni4yLjAuMTcwNjgzNjg3Ni4wLjAuMA..

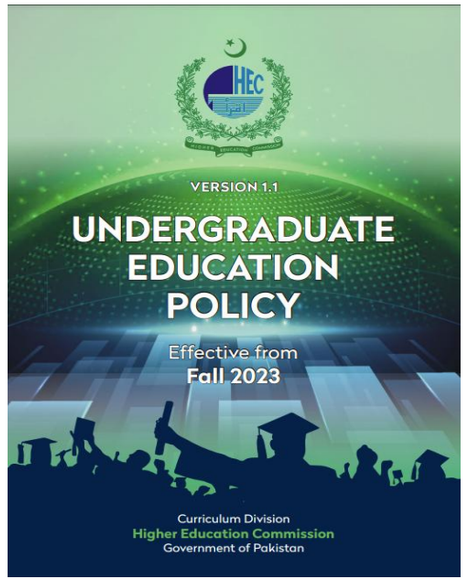
https://wfme.org/wp-content/uploads/2020/12/WFME-BME-Standards-2020.pdf



2022

GUIDELINES
FOR

UNDERGRADUATE
MEDICAL EDUCATION
CURRICULUM (MBBS)



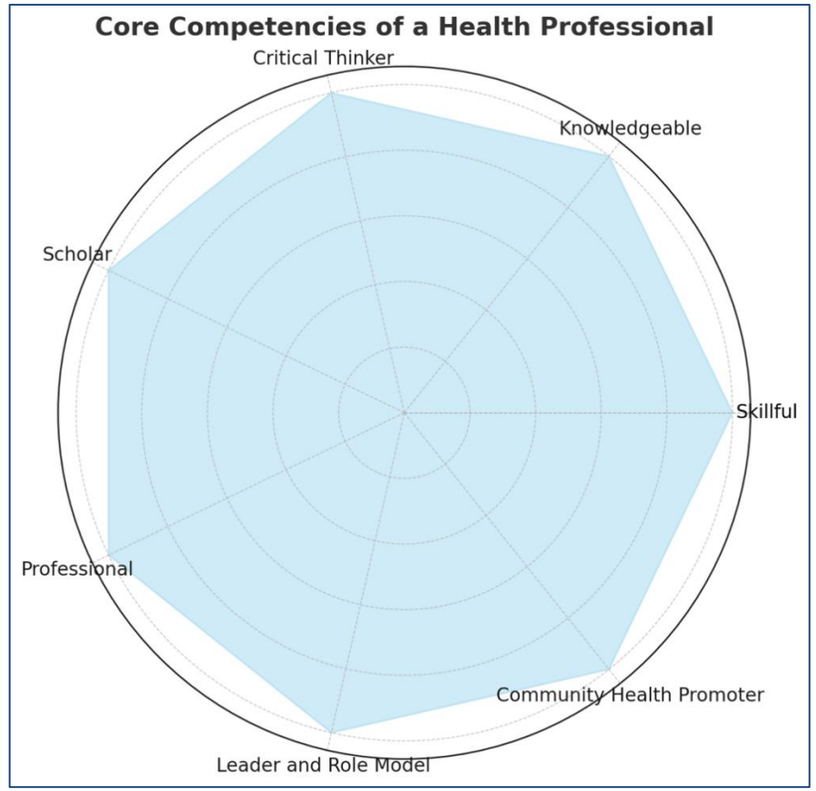
https://pmc.gov.pk/Documents/Examinations/Guidelines%20for%20Undergraduate%20Medical%20Education%20Curriculum%20(MBBS).pdf

https://www.hec.gov.pk/english/services/students/UEP/Documents/UGE-Policy.pdf

According to Pakistan Medical and Dental Council (PMDC) guidelines for undergraduate Medical Education Curriculum (MBBS) 2022

Seven-star doctor

Skillful	Knowledgeable
Community health promoter	Critical thinker
Professional	Scholar
Leader and role model	



1. Skillful (Clinical, Cognitive and Patient Care Skills)

Takes a focused history
Perform physical and psychological examination
Formulates a provisional diagnosis
Orders appropriate investigations
Performs various common procedures
Debates, formulates management plans
Manages time and prioritizes tasks
Ensures patient safety.
Advises and counsels, educates, recognizes and takes in to consideration issues of equality
Describes and debates the reasons for the success or failures of various approaches

2. Knowledgeable (Scientific Knowledge for Good Medical Practice)

Differentiates, relates, applies and ensures knowledge is gained.

3. Community Health Promoter (Knowledge of Population Health and Healthcare Systems)

Understands their role and be able to take appropriate action
Determinants of health impact on the community
Takes appropriate action for infectious non-communicable disease and injury prevention

Evaluates national and global trends in morbidity and mortality
Works as an effective member of health care team
Adopts a multidisciplinary approach for health promotion
Applies the basics of health systems
Makes decisions for health care.

4. Critical thinker (Problem Solving and Reflective Practice)

Use of information Critical data evaluation Dealing effectively with complexity, uncertainty and probability
Regular reflection on their practice Initiating participating in or adopting to change,
flexibility and problem-solving approach Commitment to quality assurance,
Raising concerns about public risks and patient safety.

5. Professional (Behavior and Professionalism)

Life long, self-directed learner Demonstrates continuous learning
Seeks peer feedback Manages information effectively
Provides evidence of continuing career advancement Functions effectively as a mentor and a trainer,
responds positively to appraisals and feedback Altruistic and empathetic
Ethical, Collaborator, Communicator.

6. Scholar and Researcher

a. Identifies a researchable problem and critically reviews the literature
b. Phrases succinct research questions and formulates hypotheses
c. Identifies the appropriate research design(s) in epidemiology and analytical tests in biostatistics to answer the research question.
d. Collects, analyzes and evaluates data, and presents results.
e. Demonstrates ethics in conducting research and in ownership of intellectual property.

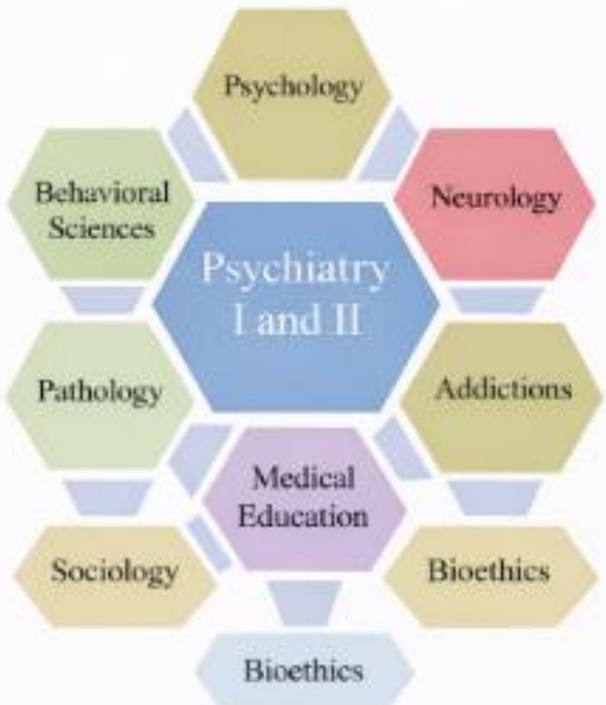
7. Leader and Role Model

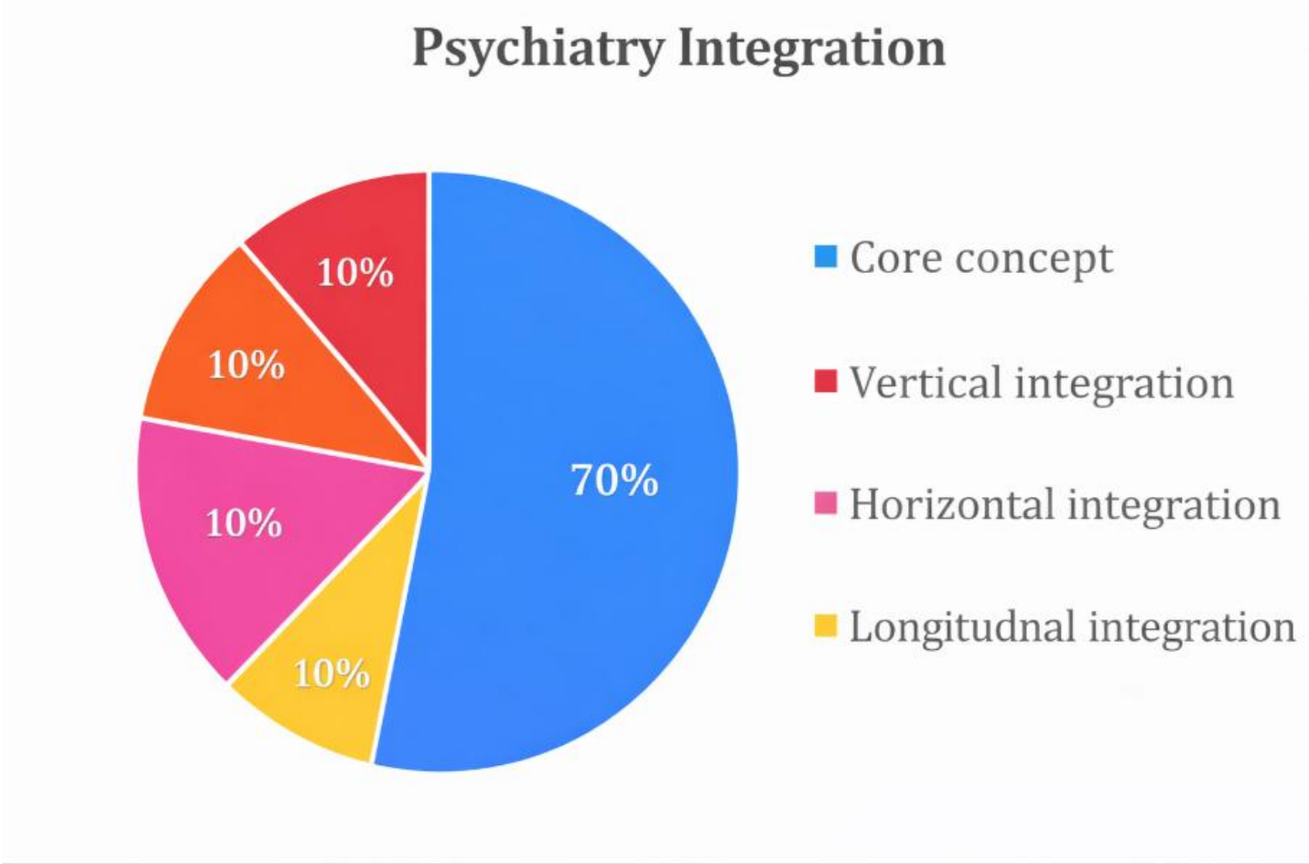
Demonstrates exemplary conduct and leadership potential in a. advancing healthcare b. enhancing medical education c. initiating, participating in and adapting to change, using scientific evidence and approaches d. Enhancing the trust of the public in the medical profession by being exceptional role model at work and when away e. accepting leadership roles f. Providing leadership in issues concerning society.

- Appreciate concepts & importance of
  - **Research**
  - **Biomedical ethics**
  - **Family medicine**
  - **Artificial Intelligence**

This module will run in 6 weeks duration. The content will be covered through introduction of topics. Instructional strategies are given in the time table and learning objectives are given in the study guides. Study guides will be uploaded on the university website.

Integration of Disciplines in Psychiatry / Spirally Integrated Disciplines




Psychiatry Integration
70%
10%
10%
10%
10%
Core concept
Vertical integration
Horizontal integration
Longitudnal integration

Study Guide: Terms & Abbreviations

Contents

Tables & Figures

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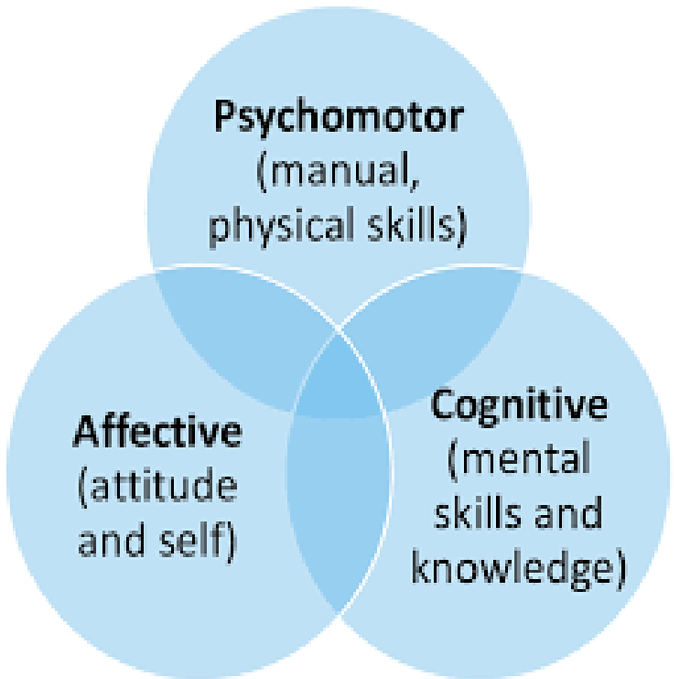


Domains of learning according to Blooms Taxonomy

Sr. #	Abbreviation	Domains of learning
1.	C	**Cognitive Domain:** knowledge and mental skills.
	● C1	Remembering
	● C2	Understanding
	● C3	Applying
	● C4	Analyzing
	● C5	Evaluating
	● C6	Creating
2.	P	**Psychomotor Domain:** motor skills.
	● P1	Imitation
	● P2	Manipulation
	● P3	Precision
	● P4	Articulation
	● P5	Naturalization
3.	A	**Affective Domain:** feelings, values, dispositions, attitudes, etc
	● A1	Receive
	● A2	Respond
	● A3	Value
	● A4	Organize
	● A5	Internalize

Section I

Teaching and Learning Methodologies / Strategies

1. Large Group Interactive Session (LGIS)

The large group interactive session is structured format of Prof Umar Model of Integrated lecture. It will be followed for delivery of all LGIS. Lecturer will introduce a topic or common clinical condition and explain the underlying phenomena through questions, pictures, videos of patients, interviews and exercises, etc. Students are actively involved in the learning process.

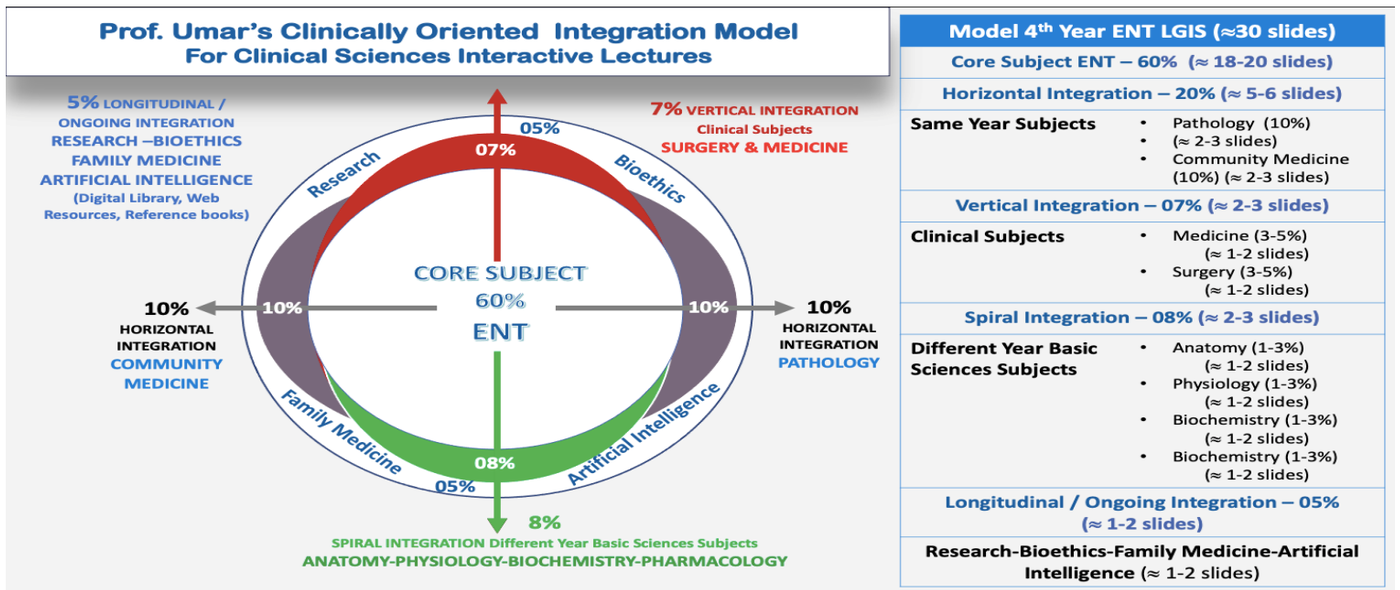


Figure 1. Prof Umar's Model of Integrated Lecture

2. Small Group Discussion (SGD)

This format helps students to clarify concepts acquire skills and attitudes. Sessions are structured with the help of specific exercises such as patient case, interviews or discussion topics or power point presentations. Students exchange opinions and apply knowledge gained from lectures, SGDs and self-study. The facilitator role is to ask probing questions, summarize and helps to clarify the concepts.

Step 1	Sharing of Learning objectives by using students Study guides	First 5 minutes
Step 2	Asking students pre-planned questions from previous teaching session to develop co-relation (these questions will be standardized)	5minutes
Step 3	Students divided into groups of three and allocation of learning Objectives	5minutes
Step 4	ACTIVITY: Students will discuss the learning objectives among Themselves	15 minutes
Step 5	Each group of students will present its learning objectives	20 min
Step 6	Discussion of learning content in the main group	30min
Step 7	Clarification of concept by the facilitator by asking structured questions from learning content	15 min
Step 8	Questions on core concepts	
Step 9	Questions on horizontal integration	
Step 10	Questions on vertical integration	
Step 11	Questions on related research article	
Step 12	Questions on related ethics content	
Step 13	Students Assessment on online MS teams (5 MCQs)	5 min
Step 14	Summarization of main points by the facilitator	5 min
Step 15	Students feedback on the SGD and entry into logbook	5 min
Step 16	Ending remarks	

Table 2. Standardization of teaching content in Small Group Discussion

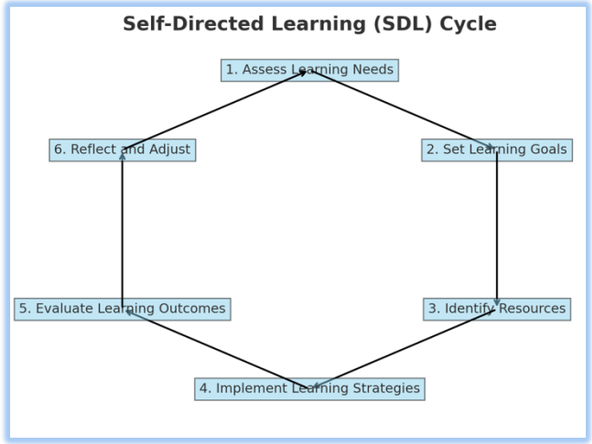
S.No	Topics	Approximate %
1	Title Of SGD	
2	Learning Objectives from Study Guides	
3	Horizontal Integration	5%+5% = 10%
4	Core Concepts of the Topic	70%
5	Vertical Integration	10%
6	Related Advance Research points	3%
7	Biomedical Ethical points	2%
8	Spiral integration	5%

Table 3. Steps of taking Small Group Discussions

3. Self-Directed Learning (SDL)

- Self- directed learning is a process where students take primary charge of planning, continuing and evaluating their learning experiences.
- Time home assignment
- Learning objectives will be defined
- Learning resources will be given to students = Text book (page no), web site
- Assessment: i. online on LMS (Mid module/ end of Module)

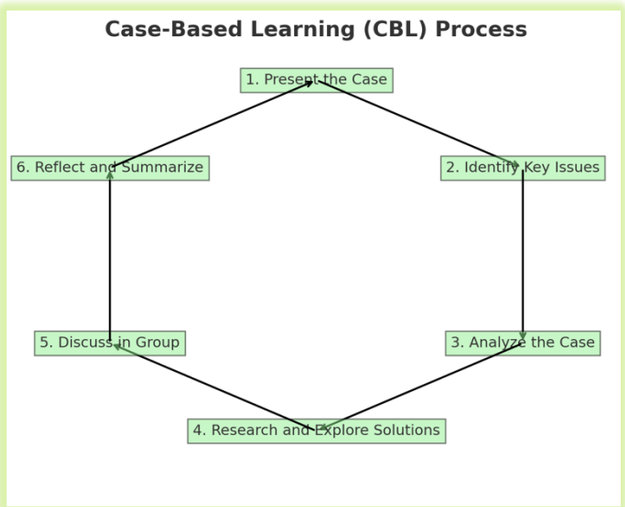
  ii. OSPE station



4. Case Based Learning (CBL)

- It's a learner centered model which engages students in discussion of specific scenarios that resemble typically are real world examples.
- Case scenario will be given to the students
- Will engage students in discussion of specific scenarios that resemble or typically are real-world examples.
- Learning objectives will be given to the students and will be based on:

i. To provide students with a relevant opportunity to see theory in practice
ii. Require students to analyze data in order to reach a conclusion.
iii. Develop analytic, communicative and collaborative skills along with content knowledge.



SECTION-II

Learning Objectives, Themes, Transdisciplinary Joint sessions

Contents

Orientation Day Introduction to New Teaching Block & Hospital Disciplines

Medical Education And Integrated Disciplines			
Topic	**Facilitator**	**Learning Objectives**	**Teaching Strategy**
Introduction to RMU and Allied Hospitals	**Vice Chancellor**	**Honourable VC will welcome and introduce the University and Allied Hospitals.**	
The students will be able to:			
Introduction to Medical Education Department	**Assistant Director DME**	● **Introduce DME** ● **Define Medical Education** ● **Discuss its role** ● **Appreciate role of DME in their curriculum** ● **Appreciate role of DME in attendance monitoring** ● **Illustrate the application** ● **Leave submission process**	**LGIS**
Introduction to Pre-Clinical Sciences	**Implementation In charge 4th Year MBBS**	● **Introduction to Departments** ● **Introduction to Hospitals** ● **Discussion about Teaching & Learning strategies** ● **Assessment Model** ● **Discipline**	**LGIS**
Introduction to Medicine & Allied	**Lecture by Dean of Medicine & Allied**	● **Define medicine** ● **Discuss History of medicine** ● **Describe Islamic concepts of medicine** ● **Identify Basic sciences involved in medicine** ● **Identify Clinical subjects and their role** ● **Describe practice of medicine** ● **Describe the process**	**LGIS**

Symptom-Oriented Integrated Clinical Clerkship (SOICC) Psychiatry

4th Year MBBS Clinical Clerkship

Surgery Allied

1. Orthopedics (2 Weeks)
2. Urology (2 Weeks)
3. Neurosurgery (2 Weeks)
4. Anaesthesia (2 Weeks)

ENT Cluster

1. ENT HFH (2 weeks)
2. ENT BBH (2 weeks)
3. ENT RTH (2 weeks)
4. COM.MED (2 weeks)

Medicine Allied

1. Nephrology (2 weeks)
2. Dermatology (2 weeks)
3. Fam.Med (2 weeks)
4. Psychiatry (2 weeks)

EYE Cluster

1. EYE HFH (2 weeks)
2. EYE BBH (2 weeks)
3. EYE RTH (2 weeks)
4. Pathology (2 weeks)

RATIONALE OF THE Psychiatry CLINICAL CLERKSHIP PROGRAM	GENERAL LEARNING OBJECTIVES
The 4th Year MBBS Psychiatry Clinical Clerkship is structured around high-frequency psychiatric presentations and comprehensive psychiatric assessment, rather than traditional diagnostic categories alone. This thematic, symptom-oriented approach mirrors real clinical practice, where patients present with psychological and u concerns rather than predefined diagnostic labels. This model promotes the development of clinical reasoning by enabling students to construct biopsychosocial formulations based on presenting symptoms, differentiate normal psychological responses from psychiatric pathology, recognize common mental disorders, and identify features such as suicidality, aggression, severe cognitive impairment, and medical causes of psychiatric symptoms requiring urgent intervention. The structure emphasizes hypothesis-driven diagnostic thinking, reflective practice, and patient-centered assessment rather than rote memorization of diagnostic criteria. The clerkship operates within a workplace-based, competency-driven framework where students progressively advance from foundational interviewing and mental state examination skills to integrated diagnostic formulation and management planning across outpatient clinics, inpatient psychiatry units, and consultation-liaison settings. This spiral progression ensures increasing complexity, contextual exposure, and refinement of communication, empathy, and clinical decision-making skills in authentic patient environments. Educationally, the program aligns with:	**Psychiatry Integrated Clinical Clerkship (4th Year MBBS)** By the end of the 2-week clerkship, students will be able to: **Clinical Assessment Competencies** 1. Take a focused, symptom-oriented psychiatric history for patients presenting with: o Low mood, anhedonia, fatigue o Elevated mood, irritability, increased energy o Suicidal ideation and deliberate self-harm o Psychotic symptoms including hallucinations and delusions o Cognitive impairment and memory complaints o Acute confusion and altered behavior o Perinatal mood symptoms 2. Perform systematic psychiatric assessment including: o Comprehensive psychiatric history o Mental State Examination (MSE) o Risk assessment (suicide, violence, vulnerability) o Cognitive assessment (orientation, memory, attention) o Capacity assessment o Collateral history when appropriate **Clinical Reasoning Competencies** 3. Generate appropriate differential diagnoses based on presenting symptoms.

• **Harden's Integration Ladder (Levels 9–11)** by integrating basic sciences with clinical disciplines and encouraging interdisciplinary reasoning. • **Miller's Pyramid**, progressing from "Knows How" to "Shows How" and approaching "Does" under supervision. • **Competency-Based Medical Education (CBME)** through observable, measurable clinical competencies. • **Patient-centered care principles**, emphasizing communication, professionalism, and ethical responsibility.	4. Differentiate primary psychiatric disorders from medical or neurological conditions. 5. Recognize psychiatric emergencies including: o Suicidal ideation with intent o Acute psychosis with agitation o Severe depressive episode with psychotic features o Delirium o Severe mania o Postpartum psychosis 6. Formulate biopsychosocial case formulations integrating biological, psychological, and social factors. **Management & Safety Competencies** 7. Outline initial management strategies for common psychiatric conditions including depression, bipolar disorder, schizophrenia, delirium, and anxiety disorders. 8. Identify cases requiring urgent referral, admission, or multidisciplinary intervention. 9. Demonstrate understanding of psychopharmacology principles including indications, side effects, and monitoring. 10. Participate in ward rounds and observe management planning including medication review and psychosocial interventions. **Communication & Professionalism** 11. Counsel patients and families regarding: • Nature of mental illness • Treatment options and adherence • Relapse prevention • Risk management • Stigma reduction

	12. Communicate sensitively with patients experiencing distress, psychosis, or suicidal thoughts. 13. Maintain confidentiality, informed consent, and ethical conduct in psychiatric practice. 14. Demonstrate empathy, cultural sensitivity, and non-judgmental attitude in patient interactions **Integration & Systems-Based Competencies** 15. Integrate neuroscience, psychology, pharmacology, and social determinants of health with clinical assessment. 16. Collaborate effectively within multidisciplinary teams including psychology, social work, nursing, neurology, medicine, pediatrics, and obstetrics. 17. Recognize community mental health resources and referral pathways. 18. Understand legal and ethical considerations including capacity, consent, and patient rights

Theme	Theme	Core Competency Emphasis
Theme 1	Patient presented with **low mood, low energy** and **anhedonia.**	Assess depressive symptoms and severity. Evaluate suicide risk. Formulate basic management plan.
Theme 2	Patient presented with **elated mood, increased energy and grandiosity.**	Identify features of mania. Assess risk and differential diagnosis. Outline initial management.
Theme 3	Patient presented **ideas to harm** himself/herself. There is history of self-harm in past, **multiple cut marks** on forearms and thigh.	Conduct suicide risk assessment. Develop safety plan. Communicate empathetically.
Theme 4	Patient presented with self-talk and self-laugh. Patient had **auditory hallucinations** and **delusion of passivity.**	Perform mental state examination. Recognize psychotic symptoms. Plan initial management and referral.
Theme 5	Patient presented with forgetfulness for last few years. It was accompanied with poor judgement and forgetting names of family members.	Perform cognitive assessment. Differentiate dementia from other causes. Provide caregiver guidance.

Theme 6	Patient presented with fluctuating course of behaviour. Patient had acute onset of symptoms and disorganized thought process.	Recognize delirium features. Identify medical causes. Initiate urgent referral.
Theme 7	Patient presented with mood symptoms 1 month after childbirth. She had low mood and weeping spells and was unable to take care of her child.	Recognize postpartum depression. Assess mother and infant safety. Provide support and referral.
Theme 8	Assessment	

WEEK 1 – Theme 1, 2,3 and 4

WEEK 2 – Theme 5, 6 and 7

Day	Clinical Case	Core Teaching Points	Harden Integration Level	Multidisciplinary (Level 11)	Skills	Attitude
Day 1	Low mood Easy Fatiguability Anhedonia	Definition & classification of depressive disorders, biopsychosocial model, risk factors, suicide risk assessment, **management** principles	Level 8–9: Clinical integration & reasoning	Psychiatry, Psychology, Pharmacology, Community Medicine	Focused psychiatric history, MSE, suicide risk assessment	Empathy, non-judgmental approach, active listening
Day 2	Elated mood Increased energy Grandiosity	Mania vs hypomania, bipolar disorder, differential diagnosis, etiology, pharmacological management	Level 9: Clinical correlation	Psychiatry, Pharmacology, Psychology	Interview for mood disorders, risk assessment, mental state examination	Respect patient dignity, maintain therapeutic alliance
Day 3	Ideas of self-harm and past attempts	Suicide risk factors, deliberate self-harm assessment, crisis intervention, safety planning	Level 9–10: Interdisciplinary clinical correlation	Psychiatry, Emergency Medicine, Psychology, Social Work	Suicide risk assessment, safety planning, communication with family	Compassion, confidentiality, crisis sensitivity
Day 4	Hallucinations Delusions	Diagnostic criteria of schizophrenia, psychopathology, differential diagnosis, management principles	Level 8–9: Clinical reasoning	Psychiatry, Neurology, Pharmacology	Mental state examination focusing on thought & perception	Patience, non-confrontational communication
Day 5	Progressive forgetfulness Poor judgement	Types of dementia, causes, cognitive assessment, differential diagnosis, caregiver support	Level 9: Clinical integration	Psychiatry, Neurology, Geriatrics	Cognitive screening, collateral history	Respect for elderly, caregiver sensitivity

Day 6	Acute fluctuating behavior (Delirium)	Definition, causes, medical emergency recognition, investigations, management	Level 9–10: Interdisciplinary clinical correlation	Psychiatry, Medicine, Neurology, Emergency Medicine	Cognitive assessment, CAM screening, risk assessment	Calm approach, patient reassurance
Day 7	Postpartum low mood	Postpartum blues vs depression vs psychosis, risk assessment, management, mother-infant safety	Level 9: Clinical integration	Psychiatry, Obstetrics & Gynecology, Pediatrics	Perinatal history, screening for depression	Sensitivity, cultural awareness
Day 8	Assessment	Case formulation, diagnostic reasoning, presentation skills, ethical practice	Level 10: Competency consolidation	Psychiatry, Psychology	Case presentation, clinical reasoning	Professionalism, reflective practice

Specialty	Skill-Based Clerkship Learning Outcomes (LOs)
Psychiatry (Primary Discipline)	• Perform focused psychiatric history including presenting complaints, past psychiatric history, substance use, and psychosocial factors • Conduct comprehensive Mental State Examination (MSE) • Perform suicide and violence risk assessment • Develop biopsychosocial formulation • Identify diagnostic criteria of common psychiatric disorders (depression, bipolar disorder, schizophrenia, delirium, dementia) • Formulate differential diagnoses including medical causes • Develop initial management plan including pharmacological and psychosocial interventions • Present structured psychiatric case • Maintain confidentiality and obtain informed consent • Provide psychoeducation to patients and caregivers
Psychology	• Apply principles of cognitive behavioral therapy and supportive psychotherapy • Identify maladaptive thoughts and behaviors • Demonstrate basic counseling skills • Use behavioral techniques in patient education • Understand psychological assessment tools and screening scales
Neurology	• Differentiate neurological from psychiatric presentations • Perform cognitive screening (orientation, memory, attention) • Identify red flags suggesting organic brain disorders • Correlate neurological findings with psychiatric symptoms • Recognize delirium and dementia features
Pharmacology	• Explain mechanisms of antidepressants, antipsychotics, mood stabilizers, and anxiolytics • Select appropriate psychotropic medications based on clinical presentation • Recognize common side effects and drug interactions • Monitor medication response and adherence • Counsel patients regarding medication safety
Medicine	• Identify medical conditions presenting with psychiatric symptoms (thyroid disorders, infections, metabolic disturbances) • Interpret relevant laboratory investigations • Assess comorbid medical illnesses • Integrate physical health into psychiatric management
Emergency Medicine	• Recognize psychiatric emergencies (suicidal ideation, severe agitation, delirium) • Perform initial risk assessment and stabilization • Demonstrate de-escalation techniques • Initiate emergency management and referral • Ensure patient and staff safety

Obstetrics & Gynecology	• Recognize postpartum depression and psychosis • Conduct perinatal mental health screening • Assess mother and infant safety • Provide counseling and referral for specialized care
Community Medicine	• Understand epidemiology of mental illness • Identify social determinants of mental health • Recognize community mental health resources • Promote mental health awareness and stigma reduction • Participate in preventive mental health strategies

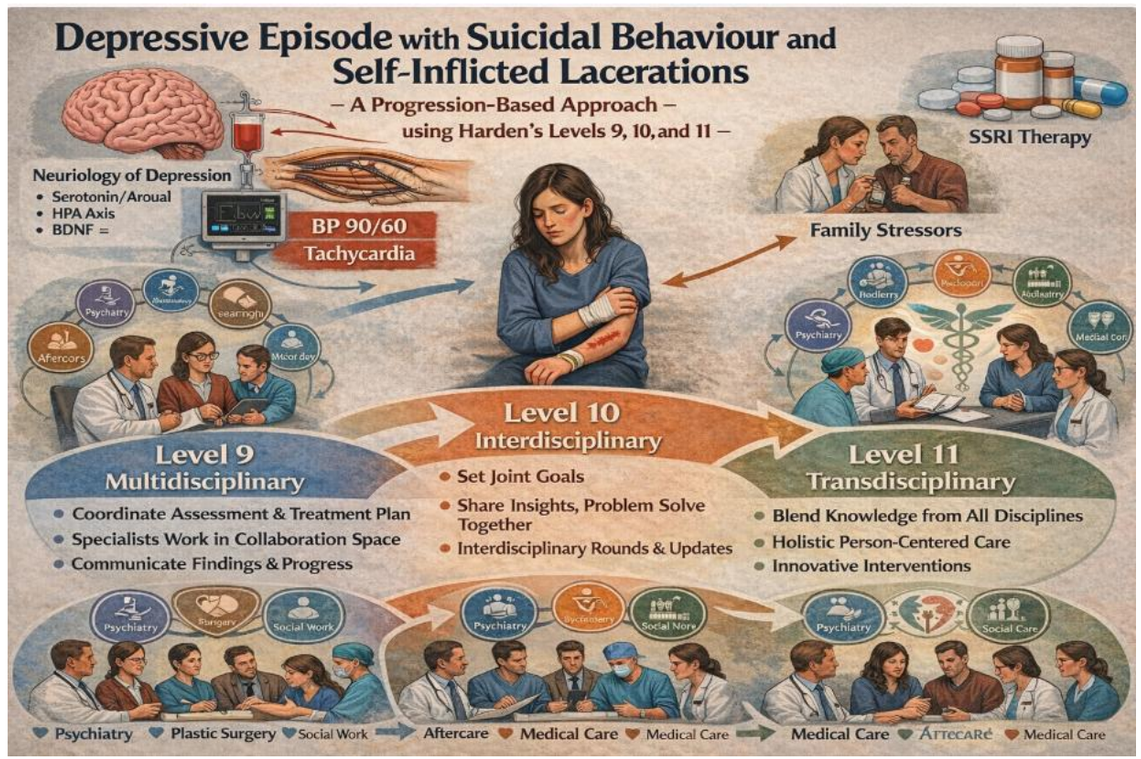
This clerkship achieves:

- **Level 1–4** → Foundational applied sciences
- **Level 7–8** → Temporal coordination
- **Level 9** → Multidisciplinary integration
- **Level 10** → Interdisciplinary problem-solving
- **Level 11** → Transdisciplinary clinical decision-making

CLINICO-CONCEPT CONNECT SESSION

“Depressive Episode with Suicidal Behaviour and Self-Inflicted Lacerations”

A 24 year old university student is brought to emergency room by her brother after making multiple cuts on her forearm with a kitchen knife following the release of disappointing results. She reports low mood, loss of interest and poo r sleep along with early morning awakening, fatigue and increased thoughts of death over past few weeks. On examination, she appears pale and has tachycardia with low blood pressure. She has several lacerations on her forearm one requiring surgical repair. Mental state examination reveals low mod, hopeless thoughts and ongoing suicidal ideas. Laboratory tests show mild anaemia consistent with a cute blood loss she has been admitted for wound management.



Student Task (Problem Based Trigger)

Students are asked to

- Identify the key clinical concerns in this patient
- Assess the risk in this patient
- Communicate empathetically with the patient

- Elicit relevant psychopathology on Mental State Examination
- Explain the pathophysiology
- Interpret the laboratory investigations
- Develop a comprehensive management plan
- Psychoeducate the Family regarding risk of self-harm

What makes this Harden's integration Level 11?

- No subject headings
- Knowledge domains are embedded within clinical reasoning
- Organizing principle is the patient problem not disciplines
- Learning mimics authentic clinical decision making

Integration

- Pathophysiology
- Pharmacology
- Medicine
- Surgery

Teaching Format:

- Small group facilitated learning
- Faculty from different backgrounds present but not teaching in silos

- Students built their care pathway themselves
- Assessment based on competence and clinical reasoning

Academic Justification statement:

The case has been designed to reflect Harden Level 11 (Transdisciplinary integration) where learning is structured around authentic patient problems rather than disciplinary categories.

Discipline	Nature of contribution	Approximate weight
Psychiatry	Differential Diagnosis Risk assessment Mental State Examination	60%
Pathology	Anatomical and physiological basis of Depression	15%
Pharmacology	Mechanism of action of Psychotropics Drug Interactions Common side effects	15%

Medicine	Interpretation of Laboratory Investigations Fluid Balance Systemic stabilization	5%
Surgery	Provision of appropriate wound care for injuries related to deliberate self harm	5%

Assessment Policy

SECTION-III

Assessment

FOURTH YEAR MBBS

Clinical Clerkship Programme

Cluster-Based Rotation Framework with Assessment Guidelines

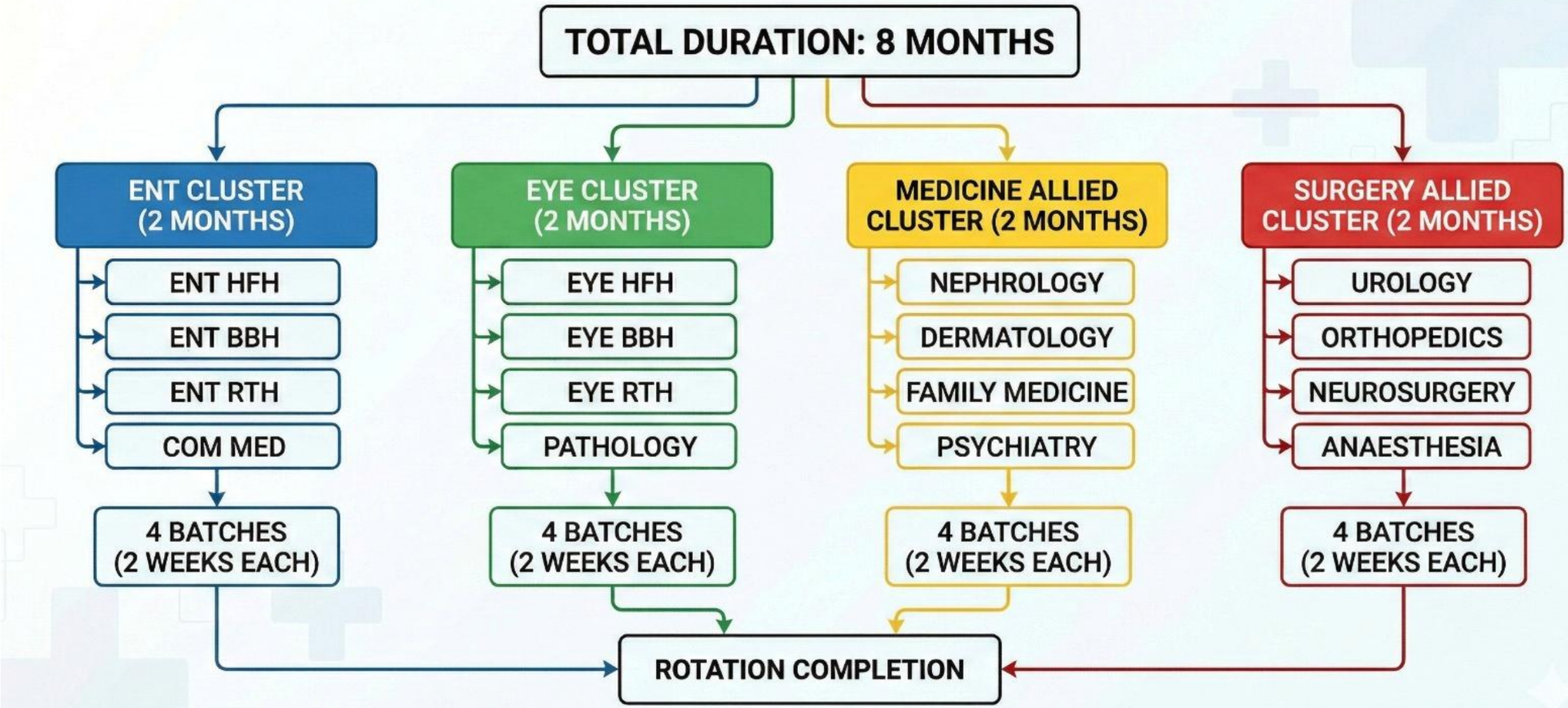
Four Clinical Clusters | Four Batch Rotations | 2-Week Modules

End Module Assessments + End Block Assessments

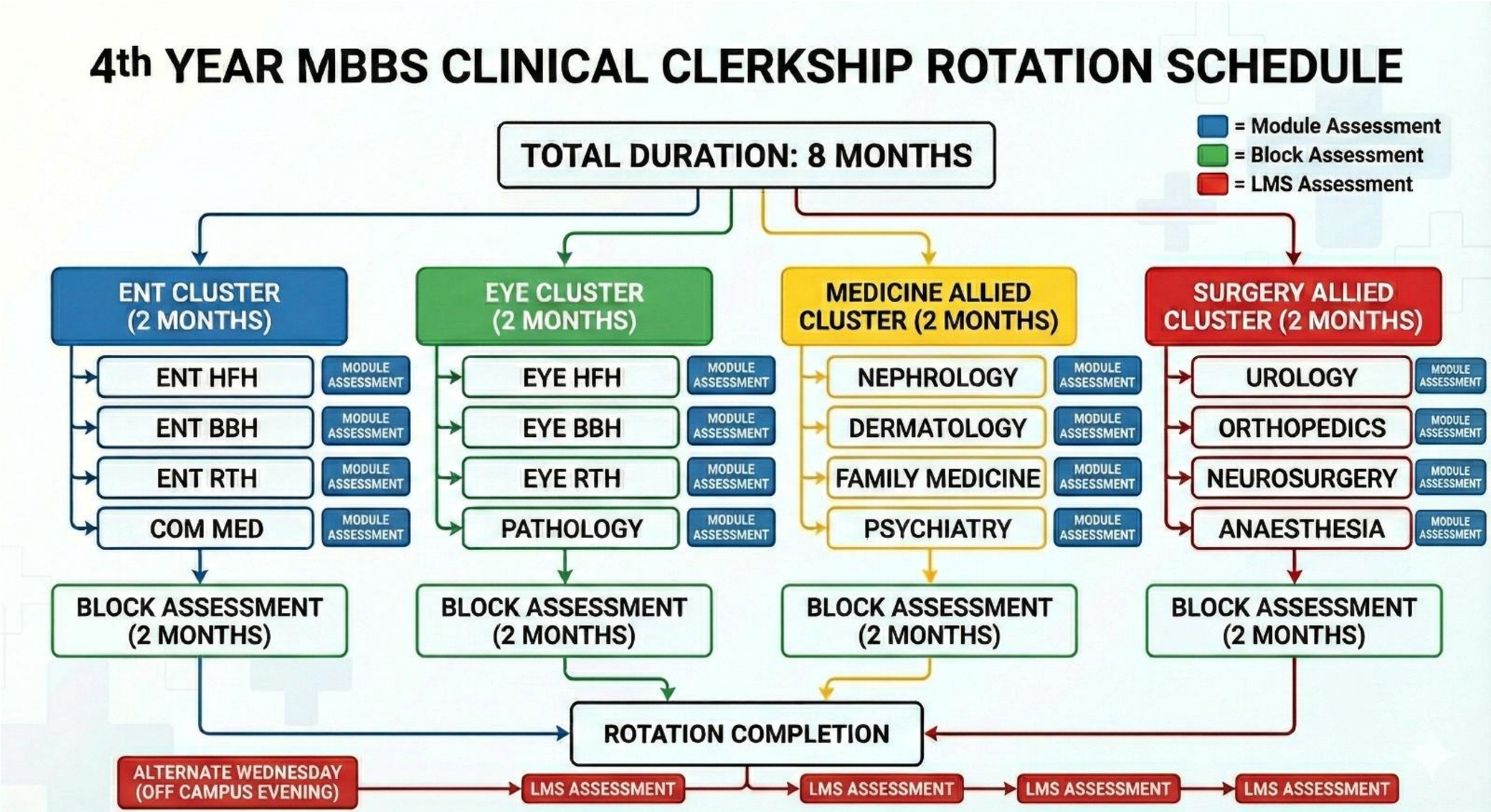
Department of Medical Education

Faculty of Medicine

4th YEAR MBBS CLINICAL CLERKSHIP ROTATION SCHEDULE



4th YEAR MBBS CLINICAL CLERKSHIP ROTATION SCHEDULE



1. Programme Overview

The Fourth Year MBBS Clinical Clerkship Programme is structured around a cluster-based rotation framework designed to provide comprehensive, systematic, and equitable clinical exposure across all major medical and surgical specialties. Students are organized into four batches that rotate concurrently across four defined clinical clusters, ensuring that all batches complete exposure to all clusters over the academic year.

Each cluster comprises four affiliated departments or hospital units, with each rotation lasting two (2) weeks. Upon completion of all four rotations within a cluster, a full block of two (2) months is completed. This cycle then repeats, allowing for structured progression through all clusters.

1.1 Programme Structure at a Glance

Parameter	Details
Academic Level	Fourth Year MBBS (Final Clinical Year — Phase I)
Total Clusters	4 Clusters running concurrently
Total Batches	4 Batches rotating simultaneously across clusters
Rotation Duration	2 Weeks per department/module
Block Duration	2 Months per cluster (4 × 2-week rotations)
Departments per Cluster	4 Departments / Venues
End Module Assessment	After every 2-week rotation
End Block Assessment	After every 2-month cluster block
Cycle	Repeating — all batches complete all clusters

2. Clinical Clusters and Batch Allocation

The programme is divided into four (4) clinical clusters. Each cluster is assigned one (1) batch at any given time. All four batches rotate concurrently, one per cluster, and the cycle repeats so that every batch completes every cluster.

#	Cluster Name	Batch	Departments / Venues	Duration
1	**ENT Cluster**	Batch A	ENT-HFH | ENT-BBH | ENT-RTH | Com Med	2 months (4 × 2 wks)
2	**EYE & Pathology Cluster**	Batch B	EYE-HFH | EYE-BBH | EYE-RTH | Pathology	2 months (4 × 2 wks)
3	**Medicine Allied Cluster**	Batch C	Dermatology | Nephrology | Family Medicine | Psychiatry	2 months (4 × 2 wks)
4	**Surgery Allied Cluster**	Batch D	Orthopedics | Anaesthesia | Neurosurgery | Urology	2 months (4 × 2 wks)

Note: Batches A, B, C, and D rotate through all four clusters sequentially. The cluster assigned to each batch changes at the start of every new 2-month block. After four complete cycles, all batches will have completed all four clusters.

3. Cluster 1: ENT Cluster

Batch Assigned: Batch A | Total Duration: 2 Months | Rotations: 4 × 2 Weeks

The ENT Cluster provides students with structured clinical exposure across three major teaching hospitals and the Community Medicine department. The inclusion of Community Medicine within the ENT cluster enables students to contextualise ENT disorders within a public health and primary care framework, addressing preventive, rehabilitative, and community-based aspects of ear, nose, and throat diseases.

3.1 Rotation Schedule — ENT Cluster

Week	Period	Rotation / Department	Hospital / Venue
Wk 1–2	Module 1 (Weeks 1–2)	ENT Department	Holy Family Hospital (HFH)
Wk 3–4	Module 2 (Weeks 3–4)	ENT Department	Benazir Bhutto Hospital (BBH)
Wk 5–6	Module 3 (Weeks 5–6)	ENT Department	Rawalpindi Teaching Hospital (RTH)
Wk 7–8	Module 4 (Weeks 7–8)	Community Medicine	Community Medicine Department / Field Sites

3.2 Clinical Competencies — ENT Cluster

Students rotating through the ENT Cluster are expected to develop competencies in history-taking, clinical examination, and basic procedural skills pertaining to diseases of the ear, nose, throat, head, and neck. The Community Medicine module contextualises these conditions within epidemiological, preventive, and health systems frameworks.

4. Cluster 2: EYE & Pathology Cluster

Batch Assigned: Batch B | Total Duration: 2 Months | Rotations: 4 × 2 Weeks

The EYE and Pathology Cluster provides students with clinical exposure to ophthalmology across three major teaching hospitals, supplemented by a dedicated Pathology rotation. The Pathology module reinforces laboratory-based diagnostic reasoning and integrates histopathological, microbiological, and haematological perspectives that underpin clinical decision-making in ophthalmology and beyond.

4.1 Rotation Schedule — EYE & Pathology Cluster

Week	Period	Rotation / Department	Hospital / Venue
Wk 1–2	Module 1 (Weeks 1–2)	Ophthalmology (EYE) Department	Holy Family Hospital (HFH)
Wk 3–4	Module 2 (Weeks 3–4)	Ophthalmology (EYE) Department	Benazir Bhutto Hospital (BBH)
Wk 5–6	Module 3 (Weeks 5–6)	Ophthalmology (EYE) Department	Rawalpindi Teaching Hospital (RTH)
Wk 7–8	Module 4 (Weeks 7–8)	Pathology Department	Pathology Department / Laboratory

4.2 Clinical Competencies — EYE & Pathology Cluster

Students are expected to master the ophthalmic examination including visual acuity, slit-lamp biomicroscopy, fundoscopy, and tonometry. The Pathology module reinforces competencies in interpretation of histopathology slides, haematological indices, urinalysis, and laboratory quality control principles relevant to clinical practice.

5. Cluster 3: Medicine Allied Cluster

Batch Assigned: Batch C | Total Duration: 2 Months | Rotations: 4 × 2 Weeks

The Medicine Allied Cluster integrates four allied medical specialties that are essential for comprehensive clinical practice: Dermatology, Nephrology, Family Medicine, and Psychiatry. Each sub-batch within Batch C rotates through all four specialties over the 2-month block, developing clinical competencies in both outpatient and inpatient settings across diverse patient populations.

5.1 Rotation Schedule — Medicine Allied Cluster

Week	Period	Rotation / Department	Hospital / Venue
Wk 1–2	Module 1 (Weeks 1–2)	Dermatology & Venereology	Teaching Hospital / Dermatology OPD
Wk 3–4	Module 2 (Weeks 3–4)	Nephrology	Teaching Hospital / Nephrology Unit
Wk 5–6	Module 3 (Weeks 5–6)	Family Medicine	Family Medicine Department / Community Clinic
Wk 7–8	Module 4 (Weeks 7–8)	Psychiatry	Psychiatry Department / Mental Health Unit

5.2 Clinical Competencies — Medicine Allied Cluster

Dermatology: Systematic skin examination, morphological description of lesions, management of common dermatoses, and dermoscopy basics. Nephrology: Fluid and electrolyte management, interpretation of renal function tests, renal replacement therapy principles, and management of glomerular and tubular diseases. Family Medicine: Patient-centred consultation skills, chronic disease management, preventive care, and the family as a unit of care. Psychiatry: Mental state examination (MSE), diagnosis of common psychiatric disorders, biopsychosocial formulation, and safe prescribing of psychotropic agents.

6. Cluster 4: Surgery Allied Cluster

Batch Assigned: Batch D | Total Duration: 2 Months | Rotations: 4 × 2 Weeks

The Surgery Allied Cluster exposes students to four critical surgical subspecialties: Orthopedics, Anaesthesia, Neurosurgery, and Urology. These specialties collectively cover the full perioperative pathway, trauma and musculoskeletal medicine, neurological surgery, and urological disorders. Students participate in ward rounds, operating theatre sessions, outpatient clinics, and emergency assessments under appropriate supervision.

6.1 Rotation Schedule — Surgery Allied Cluster

Week	Period	Rotation / Department	Hospital / Venue
Wk 1–2	Module 1 (Weeks 1–2)	Orthopedics & Trauma Surgery	Teaching Hospital / Ortho Ward & OT
Wk 3–4	Module 2 (Weeks 3–4)	Anaesthesia & Perioperative Medicine	Teaching Hospital / Anaesthesia Department & OT
Wk 5–6	Module 3 (Weeks 5–6)	Neurosurgery	Teaching Hospital / Neurosurgery Unit
Wk 7–8	Module 4 (Weeks 7–8)	Urology	Teaching Hospital / Urology Ward & OT

6.2 Clinical Competencies — Surgery Allied Cluster

Orthopedics: Musculoskeletal examination, fracture management, splinting, and interpretation of orthopaedic imaging. Anaesthesia: Pre-operative assessment, airway management principles, monitoring parameters, and post-operative pain management. Neurosurgery: Neurological examination, Glasgow Coma Scale, management of head injuries and raised intracranial pressure, and interpretation of neuroimaging. Urology: Urological history and examination, catheterisation, urinalysis interpretation, and management of common urological emergencies.

7. Assessment Framework

The assessment system is designed on a two-tier model: End Module Assessments (EMA) following every 2-week rotation, and End Block Assessments (EBA) following every 2-month cluster block. Both tiers are mandatory, formative feedback is provided after each assessment, and results contribute to the overall summative academic record.

7.1 Assessment Cycle Summary

Cycle	Duration	Assessment Type	Format	Total Marks
Every 2 Weeks	After each department rotation	**End Module Assessment**	25 MCQs + 5 OSCE	**50 Marks**
Every 2 Months	After completion of all 4 rotations in cluster	**End Block Assessment**	25 MCQs + 5 AV OSPE + 5 OSCE	**100 Marks**

7.2 End Module Assessment (EMA)

Conducted After Every 2-Week Rotation | Total: 50 Marks

The End Module Assessment is administered at the conclusion of each 2-week departmental rotation. It evaluates the module-specific knowledge, clinical reasoning, and practical skills acquired during that rotation. The EMA comprises two components: a written component using LMS-based Multiple Choice Questions and a clinical skills component via OSCE stations.

Table of Specification (TOS) — End Module Assessment

Assessment Component	Format	No. of Items	Marks per Item / Total
Written Component	LMS MCQs	25	1 mark each / 25 marks
Clinical Skills Component	OSCE Stations	5 Stations	5 marks each / 25 marks
TOTAL		**30 Items**	**50 Marks**

EMA Component	Specifications

LMS MCQs	25 single-best-answer MCQs delivered via the Learning Management System (LMS). Questions are mapped to the module's clinical competencies. Each MCQ carries 1 mark. No negative marking. Time allowed: 30 minutes.
OSCE Stations	5 stations, each carrying 5 marks (Total: 25 marks). Stations are competency-based and may include history-taking, clinical examination, procedural skills, data interpretation, and clinical communication. Duration: 5–7 minutes per station.
Pass Mark	50% overall (25/50 marks) with no individual component failure threshold at module level. However, attendance at both components is mandatory.

7.3 End Block Assessment (EBA)

Conducted After Every 2-Month Block | Total: 100 Marks

The End Block Assessment is a comprehensive summative examination conducted at the end of each 2-month cluster block. It integrates knowledge, diagnostic reasoning, and clinical skills across all four departments within the cluster. The EBA is a high-stakes assessment and carries greater weighting in the academic record. It comprises three components: LMS MCQs, Audio-Visual OSPE (AV OSPE), and OSCE stations.

Table of Specification (TOS) — End Block Assessment

Assessment Component	Format	No. of Items	Marks per Item / Total
Written Component	LMS MCQs	25	1 mark each / 25 marks
Practical / Lab Component	AV OSPE Stations	5 Stations	5 marks each / 25 marks
Clinical Skills Component	OSCE Stations	5 Stations	10 marks each / 50 marks
TOTAL		**35 Items**	**100 Marks**

EBA Component	Specifications
LMS MCQs	25 single-best-answer MCQs covering all four departments of the cluster block. Delivered via the Learning Management System. Each MCQ carries 1 mark. No negative marking. Time allowed: 30 minutes.
AV OSPE Stations	5 Audio-Visual OSPE stations, each carrying 5 marks (Total: 25 marks). Each station presents a clinical scenario using audio, video, imaging, or laboratory material. Students respond to structured written questions. Duration: 5 minutes per station. Skills tested include radiograph/ECG/lab report interpretation, image-based diagnosis, procedural videos, and audio-clinical vignettes.

OSCE Stations	5 OSCE stations, each carrying 10 marks (Total: 50 marks). High-fidelity stations assessing complex clinical competencies including integrated history and examination, clinical decision-making, procedural skills, counselling, and interprofessional communication. Duration: 8–10 minutes per station. Standardised patients, mannequins, and task trainers may be used.
Pass Mark	50% overall (50/100 marks). Failure in any individual component (MCQ, AV OSPE, or OSCE) below 40% requires remediation for that component.

Date Sheet:

For LMS Assessment (Every Alternate Wednesday)

S.No	Date	Day	Assessment Type
1	18-03-2026	Wednesday	LMS Module Assessment
2	08-04-2026	Wednesday	LMS Module Assessment
3	22-04-2026	Wednesday	LMS Module Assessment
4	06-05-2026	Wednesday	LMS Module Assessment
5	20-05-2026	Wednesday	LMS Module Assessment
6	03-06-2026	Wednesday	LMS Module Assessment
7	17-06-2026	Wednesday	LMS Module Assessment

For Clinical Module Assessment: (End of Module Alternate Thursday)

S.No	Date	Day	Assessment Type
1	19-03-2026	Thursday	Clinical End Module Assessment
2	09-04-2026	Thursday	Clinical End Module Assessment
3	23-04-2026	Thursday	Clinical End Module Assessment
4	07-05-2026	Thursday	Clinical End Module Assessment
5	21-05-2026	Thursday	Clinical End Module Assessment
6	04-06-2026	Thursday	Clinical End Module Assessment
7	18-06-2026	Thursday	Clinical End Module Assessment

8. Master Rotation Plan — Repeating Cycle

The following master plan illustrates the repeating cycle of batch-cluster assignments. Each cycle is 2 months in duration, and after four complete cycles, every batch will have completed all four clusters. The cycle then recommences as required.

Block / Cycle	Batch A	Batch B	Batch C	Batch D
Block 1 (Months 1–2)	ENT Cluster	EYE & Path Cluster	Medicine Allied	Surgery Allied
Block 2 (Months 3–4)	EYE & Path Cluster	Medicine Allied	Surgery Allied	ENT Cluster
Block 3 (Months 5–6)	Medicine Allied	Surgery Allied	ENT Cluster	EYE & Path Cluster
Block 4 (Months 7–8)	Surgery Allied	ENT Cluster	EYE & Path Cluster	Medicine Allied

After Block 4, the cycle repeats from Block 1 with the same rotation sequence. This ensures equitable exposure and workload distribution across all batches and departments throughout the academic year.

9. Integrated Assessment Schedule Within Each Block

The following timeline shows how module and block assessments are sequenced within a single 2-month cluster block. This pattern is identical for all four clusters.

Week	Activity	Department	Assessment	Marks
1–2	Module 1 Rotation	Dept. 1 of Cluster	—	—
End Wk 2	**End Module Assessment 1**	**—**	**25 MCQs + 5 OSCE**	**50 marks**
3–4	Module 2 Rotation	Dept. 2 of Cluster	—	—
End Wk 4	**End Module Assessment 2**	**—**	**25 MCQs + 5 OSCE**	**50 marks**
5–6	Module 3 Rotation	Dept. 3 of Cluster	—	—
End Wk 6	**End Module Assessment 3**	**—**	**25 MCQs + 5 OSCE**	**50 marks**
7–8	Module 4 Rotation	Dept. 4 of Cluster	—	—
End Wk 8	**End Module Assessment 4**	**—**	**25 MCQs + 5 OSCE**	**50 marks**
End Block	**End Block Assessment**	**All 4 Depts.**	**25 MCQ + 5 AV OSPE + 5 OSCE**	**100 marks**

10. Administrative Provisions and Policies

10.1 Attendance Requirements

A minimum attendance of 80% is mandatory in each 2-week rotation. Students failing to meet the attendance threshold will be ineligible to sit the End Module Assessment for that rotation..

10.2 Logbook and Portfolio Requirements

Students are required to maintain a clinical logbook documenting all clinical encounters, procedural competencies attempted or completed, and reflective entries for each rotation. Logbooks must be endorsed by the supervising faculty member at the end of each module. Portfolio submissions, including at minimum two structured reflective entries per cluster block, are required prior to the End Block Assessment.

10.5 Interprofessional Education

Students are encouraged to participate in interprofessional education (IPE) activities during their rotations wherever opportunities arise, including multidisciplinary team meetings, ward rounds, case conferences, and joint clinics. Participation in at least one documented IPE activity per cluster block is expected and should be recorded in the clinical portfolio.

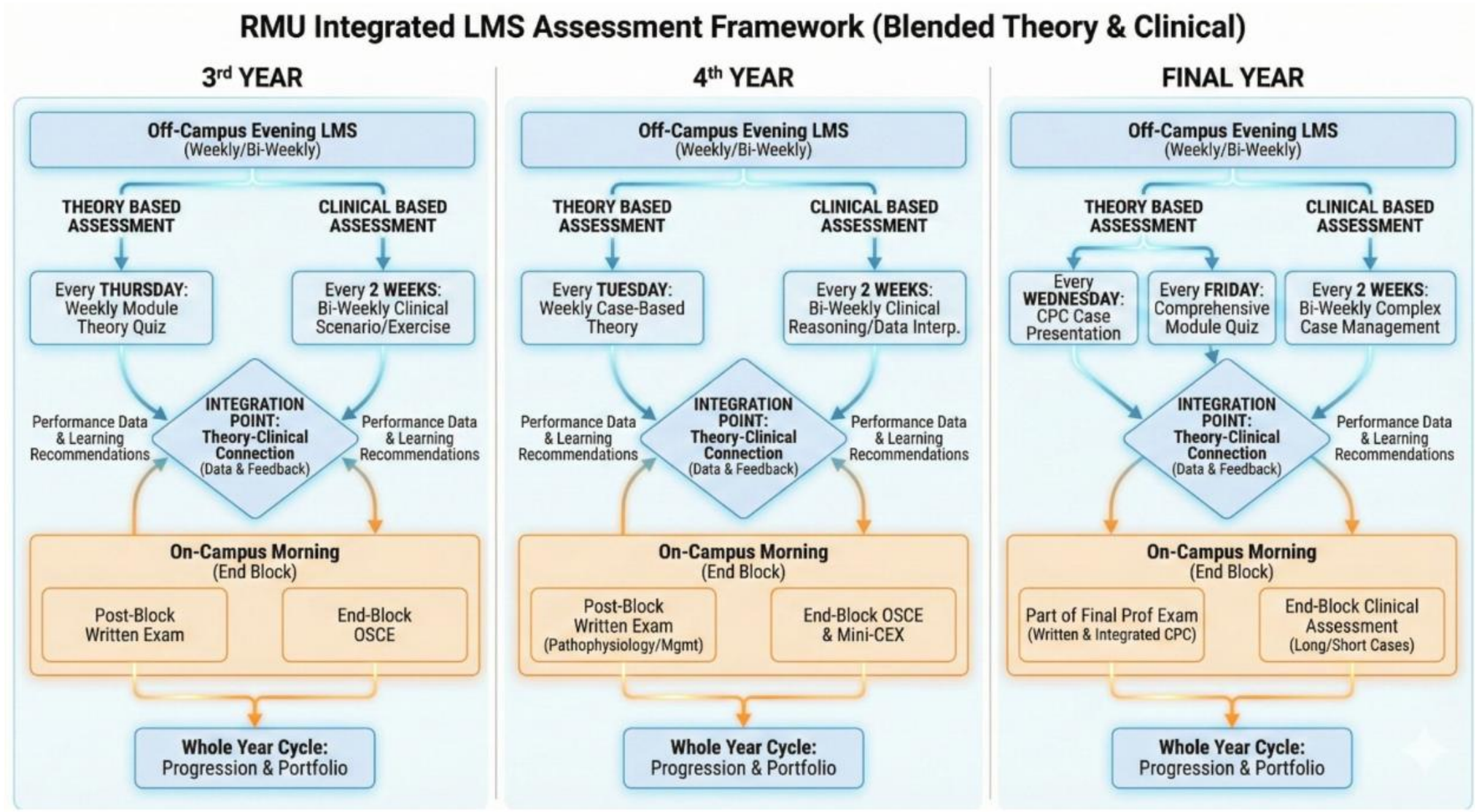
13. Document Approval

This document constitutes the official framework for the Fourth Year MBBS Clinical Clerkship Programme. It has been reviewed by the relevant academic and administrative authorities and is effective from the date of approval.

Programme Director	Dean, Faculty of Medicine	Head, Medical Education
_____ Signature & Date	_____ Signature & Date	_____ Signature & Date

Learning Management System

Rawalpindi Medical University


RMU Integrated LMS Assessment Framework (Blended Theory & Clinical)
3rd YEAR
Off-Campus Evening LMS
(Weekly/Bi-Weekly)
THEORY BASED ASSESSMENT
CLINICAL BASED ASSESSMENT
Every THURSDAY: Weekly Module Theory Quiz
Every 2 WEEKS: Bi-Weekly Clinical Scenario/Exercise
Performance Data & Learning Recommendations
INTEGRATION POINT: Theory-Clinical Connection (Data & Feedback)
Performance Data & Learning Recommendations
On-Campus Morning
(End Block)
Post-Block Written Exam
End-Block OSCE
Whole Year Cycle: Progression & Portfolio
4th YEAR
Off-Campus Evening LMS
(Weekly/Bi-Weekly)
THEORY BASED ASSESSMENT
CLINICAL BASED ASSESSMENT
Every TUESDAY: Weekly Case-Based Theory
Every 2 WEEKS: Bi-Weekly Clinical Reasoning/Data Interp.
Performance Data & Learning Recommendations
INTEGRATION POINT: Theory-Clinical Connection (Data & Feedback)
Performance Data & Learning Recommendations
On-Campus Morning
(End Block)
Post-Block Written Exam (Pathophysiology/Mgmt)
End-Block OSCE & Mini-CEX
Whole Year Cycle: Progression & Portfolio
FINAL YEAR
Off-Campus Evening LMS
(Weekly/Bi-Weekly)
THEORY BASED ASSESSMENT
CLINICAL BASED ASSESSMENT
Every WEDNESDAY: CPC Case Presentation
Every FRIDAY: Comprehensive Module Quiz
Every 2 WEEKS: Bi-Weekly Complex Case Management
INTEGRATION POINT: Theory-Clinical Connection (Data & Feedback)
Performance Data & Learning Recommendations
On-Campus Morning
(End Block)
Part of Final Prof Exam (Written & Integrated CPC)
End-Block Clinical Assessment (Long/Short Cases)
Whole Year Cycle: Progression & Portfolio

Introduction:

A Learning Management System (LMS) is a software application or platform used to deliver, manage, and track educational content and training programs. It helps organizations, institutions, or businesses deliver learning experiences to learners in an organized, scalable, and accessible way.

1.Course Creation & Management:

•Allows instructors or administrators to create and organize courses, modules, lessons, and assessments.

•Supports multimedia content such as videos, quizzes, PDFs, and presentations.

2.User Management:

Facilitates the creation of user profiles for learners, instructors, and administrators. Allows tracking of individual progress, achievements, and performance.

3.Assessment & Testing:

Includes features for creating and administering quizzes, assignments, and exams. Provides automated grading and feedback to learners.

4.Reporting & Analytics:

•Tracks learner performance, course completion rates, and engagement levels.

•Provides insights to instructors and administrators for informed decision-making.

5.Communication Tools:

•Integrates discussion boards, chat features, and email to facilitate communication between learners and instructors.

•Supports notifications and announcements.

6.Scalability & Flexibility:

•Can accommodate a growing number of learners or users.

•Supports a variety of learning styles, including synchronous (live) and asynchronous (self-paced) learning.

7.Mobile Access:

Many LMS platforms are mobile-friendly or offer mobile apps to support learning on the go.

Implementation of LMS:

To ensure the effective implementation of the Learning Management System (LMS), the following steps will be undertaken:

1.Infrastructure Setup:

The LMS will be hosted on a well-equipped platform capable of handling multiple users simultaneously, ensuring reliability and performance during peak usage times.

2.IT Department Support:

A dedicated IT department will be responsible for managing the system, providing technical support, and ensuring smooth operation.

3.User Credentials:

Unique IDs and passwords will be issued to each student by the IT department, granting secure access to the LMS. Students will be guided on how to use the platform effectively.

4.Exam Scheduling:

Dates and times for exams will be pre-set within the LMS, allowing students to prepare accordingly. The scheduling system will ensure timely availability of test materials and instructions.

5.Automated Notifications:

Automated messages will be sent to students to inform them of upcoming exams, deadlines, or important updates. These notifications will ensure students remain informed and prepared.

6.Test Notices:

Detailed test notices, including exam guidelines, formats, and schedules, will be shared with students through the LMS to ensure clarity and readiness.

This structured implementation plan will enable the LMS to function effectively, fostering a productive and organized learning environment for both students and faculty.

LEARNING MANAGEMENT SYSTEM RMU

- A campus management system is being utilized as a learning resource.
- Faculty members from all disciplines, both basic and clinical, have been actively involved and trained in using these systems to deliver lectures effectively.
- The faculty is responsible for uploading lectures, assignments, and weekly assessments.

- Each student has been provided with a unique login to access the lectures and resources on the LMS.
- Attendance for each academic activity—lectures, interactive sessions, quizzes, and assignments—is recorded separately.
- Faculty members are required to mark attendance immediately after each lecture

Objectives of a Learning Management System (LMS) for Undergraduate Medical Students

The primary objective of a Learning Management System (LMS) for undergraduate medical students is to enhance the quality of medical education by providing a comprehensive, interactive, and accessible digital platform that facilitates:

- **Efficient Delivery of Educational Content:**

To enable faculty to upload and organize lectures, assignments, assessments, and other learning resources systematically.

- **Student-Centered Learning:**

To promote self-paced, flexible learning by granting students 24/7 access to educational materials tailored to their curriculum.

- **Interactive and Engaging Learning:**

To foster active engagement through features like discussion forums, quizzes, and virtual interactive sessions.

- **Streamlined Academic Monitoring:**

To track student attendance, performance, and progress through automated attendance marking, assessments, and progress dashboards.

- **Standardization and Quality Assurance:**

To ensure uniformity in educational delivery across various disciplines and compliance with institutional and accreditation standards.

- **Feedback and Continuous Improvement:**

To integrate feedback mechanisms that involve students, faculty, and other stakeholders, driving continuous quality improvement.

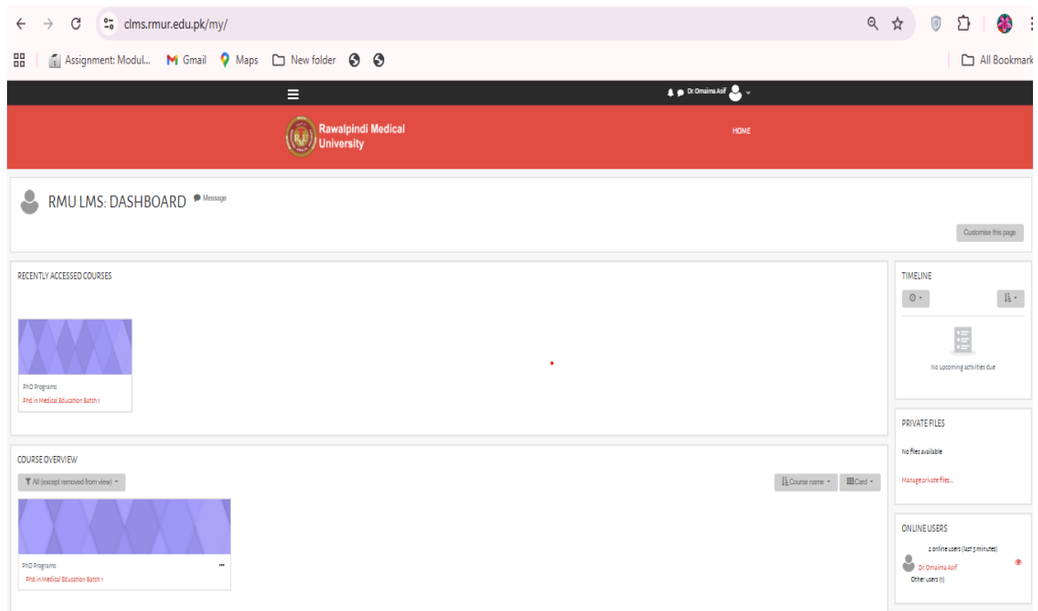
- **Integration of Technology in Medical Education:**

To familiarize students with digital tools and resources essential for modern medical practice and research.

By achieving these objectives, the LMS supports the holistic development of medical students, ensuring they are well-prepared for clinical practice and lifelong learning.

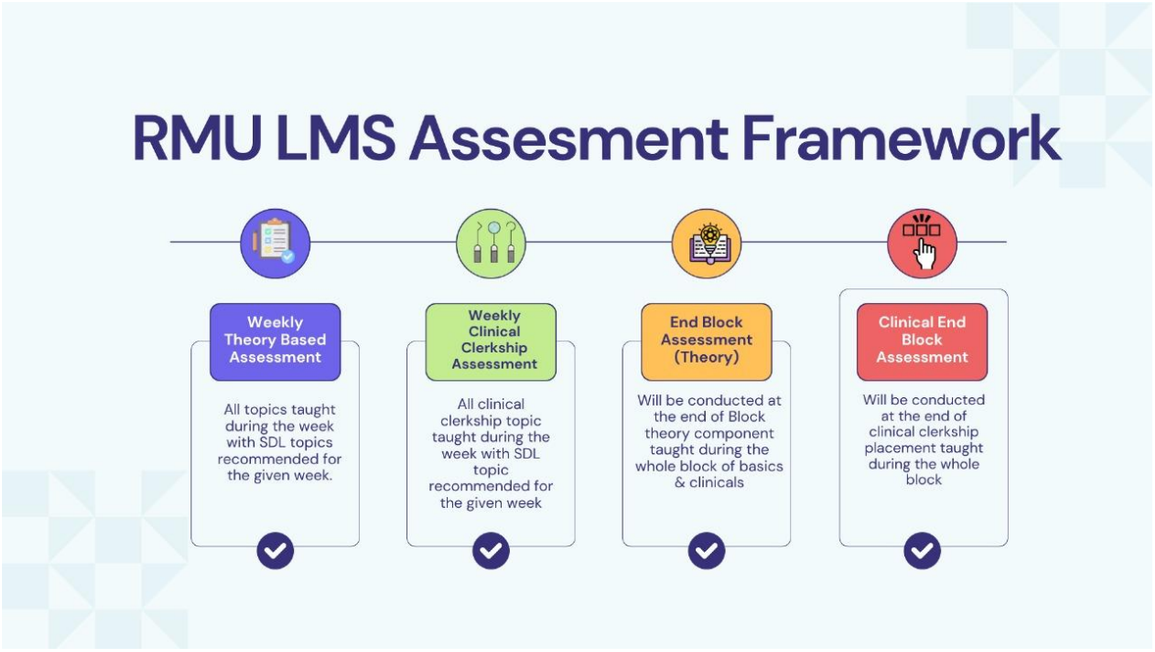
RMU LMS Website

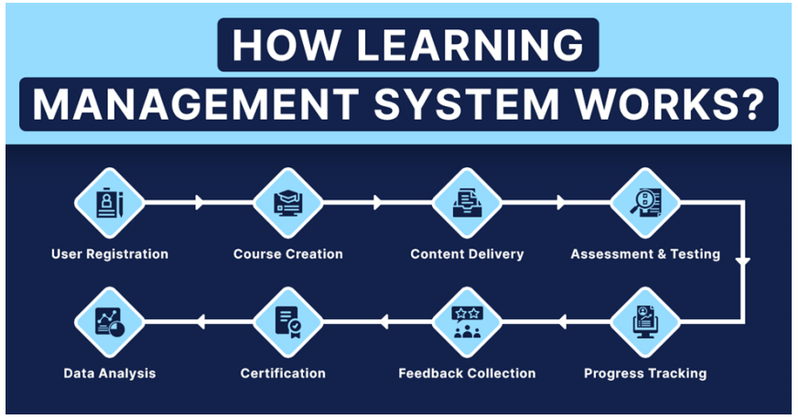
Weblink: https://clms.rmur.edu.pk/



Framework for LMS Assessment for Undergraduate Medical Students

An effective Learning Management System (LMS) assessment framework for undergraduate medical students should be structured to evaluate knowledge, skills, and attitudes systematically. It should also align with educational objectives, regulatory standards, and the specific needs of medical education. Below is a comprehensive framework:





1. Goals and Objectives of Assessment

- **Knowledge:** Evaluate understanding of basic and clinical sciences.
- **Skills:** Assess critical thinking, clinical reasoning, and procedural skills.
- **Attitudes:** Foster professionalism, ethical decision-making, and communication skills.
- **Feedback:** Provide timely, constructive feedback to support learning and growth.

2. Components of LMS-Based Assessment

a. Formative Assessments

- **Purpose:** Monitor ongoing learning and identify areas needing improvement. It includes
  - Online quizzes (MCQs, EMQs)
  - Short assignments or reflections
  - Case-based discussions
  - Interactive polls during live sessions
- **Schedule :** Weekly or module-specific

b. Practical/Skill-Based Assessments

- **Purpose:** Assess clinical skills, diagnostic reasoning, and procedural competence. Practical/skill based assessments can be taught through
  - Virtual simulations (e.g., diagnostic procedures, patient management)
  - Video submissions demonstrating skills (e.g., history-taking, physical examination)
  - Peer assessment of clinical skills via uploaded videos

c. Attendance and Participation.

Its purpose is to encourage consistent engagement in academic activities. Student's attendance is actively monitored through LMS via

  - Attendance tracking for lectures, discussions, and interactive sessions.
  - Participation metrics (e.g., activity in discussion forums, live Q&A sessions).

d. Feedback Mechanisms: Its purpose is to enhance learning and improve course delivery. Feedback monitoring can be done by following mechanisms:

  - Embedded feedback forms after each session or activity.
  - Peer and faculty reviews of assignments and projects.
  - Self-assessment tools for reflection on progress.

3. Assessment Tools and Formats

- **MCQs/EMQs:** Test foundational knowledge and application.

- **OSCE Simulations:** Evaluate clinical reasoning and procedural skills.
- **Interactive Tools:** Use polls, chat, and breakout rooms for real-time engagement.
- **Assignments:** Assess understanding through essays, case reports, or reflections.
- **Group Projects:** Foster teamwork and problem-solving skills.

4. Implementation Strategies

- **Faculty Training:** Equip faculty with skills to design and deliver online assessments.
- **Student Orientation:** Familiarize students with LMS tools and expectations.
- **Tech Infrastructure:** Ensure robust LMS functionality and technical support.
- **Accessibility:** Provide accommodations for students with disabilities or limited resources

5. Quality Assurance and Continuous Improvement

- **Evaluation Proformas:** Gather periodic feedback from students and faculty.
- **Data Analytics:** Use LMS analytics to track student performance and participation.
- **Audit Mechanisms:** Regularly review and update the assessment framework.
- **Stakeholder Input:** Incorporate suggestions from students, faculty, and external reviewers.

6. Compliance with Regulatory Standards

Launching of LMS in RMU is in alignment with regulatory bodies . Digital learning at RMU aims at

- Alignment assessments with accreditation and medical council guidelines (e.g., HEC, WFME).
- Ensure assessments address core competencies, including knowledge, skills, and professionalism.

This LMS assessment framework integrates diverse evaluation methods to ensure holistic learning and competency development in undergraduate medical students. It fosters an interactive, adaptive, and equitable learning environment, preparing students for the demands of modern medical practice.

Importance of LMS

A Central Pillar of Continuous Internal Assessment (CIA)

In today's rapidly evolving educational landscape, digital learning isn't just an add-on it's the new backbone of academic progress. Our Learning Management System (LMS) stands at the heart of this transformation, bringing structure, consistency, and accessibility to the way students learn and the way faculty deliver content.

By integrating LMS into the Continuous Internal Assessment (CIA) framework, our institution takes a major step forward in aligning with global best practices. LMS-based assessments now officially hold **10% weightage** in the overall evaluation, making regular participation not just beneficial but essential for every student.

Why LMS Matters

1. Streamlined Access to Learning

The LMS gives students a single, organized digital space where lectures, notes, assignments, quizzes, and announcements are available anytime, anywhere. No missed updates, no lost handouts everything stays just a click away.

2. Consistent, Transparent Assessment

With weekly formative and summative assessments conducted through LMS, students get a clear picture of their academic standing. The system ensures fairness, automated scoring where appropriate, and immediate feedback so learners can identify strengths and areas needing improvement.

3. Builds Stronger Learning Habits

Regular LMS assessments encourage students to stay engaged throughout the semester instead of relying on last-minute preparation. This continuous learning approach improves retention, confidence, and performance in final exams.

4. Enhances Interaction and Engagement

Through discussion forums, digital assignments, and interactive features, the LMS promotes active learning. Students participate more, collaborate more, and take greater responsibility for their progress.

5. Professional Readiness

Modern healthcare requires tech-savvy professionals who can adapt to digital tools. Using LMS throughout their training prepares students for the technologically advanced clinical and administrative environments they will soon enter.

LMS as Part of CIA: What It Means for Students

With LMS contributing **10% to the CIA**, students are encouraged to take weekly assessments seriously. Consistent participation directly boosts overall grades while also strengthening core concepts. This system rewards discipline, regular study habits, and active involvement qualities that are essential in medical education.

A Collective Step Toward Better Learning

The adoption of LMS-based CIA reflects our institution's commitment to innovation and excellence. We're not just keeping up with global standards; we're moving ahead of the curve by ensuring that every student gets a modern, interactive, and meaningful learning experience.

Implementation of LMS

Table of Specification of weekly LMS of 3rd, 4th & Final Year MBBS

Table 1: Frequency of Assessments & Distribution of MCQs in LMS

For 3rd year

Sr. #.	Nomenclature of Exam			Time	Type of Assessment	No of MCQs
1.	During module (Weekly)	LMS Test	Every Thursday evening	8:00 to 10:00 pm	Summative	100

For 4thyear:

Sr. #.	Nomenclature of Exam			Time	Type of Assessment	No of MCQs
1.	During module (Weekly)	LMS Test	Every Wednesday & Saturday evening	8:00 to 10:00 pm	Summative	10 + 20

For Final Year:

Sr. #.	Nomenclature of Exam			Time	Type of Assessment	No of MCQs
1.	During module (Weekly)	LMS Test	Every Tuesday evening	8:00 to 10:00 pm	Summative	100

Table 2: Distribution of Questions According to Level of Cognition:

Sr.#	Level of Cognition	%age Distribution of Questions	Type of Integration
1.	C1(Recall)	20%	Horizontal
2.	C2(Interpretation)	60%	Core Concept & Vertical
3.	C3(Problem Solving)	20%	Vertical(Purely Clinical Concepts)

Table 3: Implementation of Calgary Model of Categorization of Questions for LMS assessments:

Sr. No	Type of Assessment	Calgary Model		
		Must Know (A)	Should know (B)	Nice to know (C) (C)
1.	Summative	50%		50%
2.	Summative	100%		----------

LMS Curriculum

For 3rd year MBBS

Attached as annexure 1

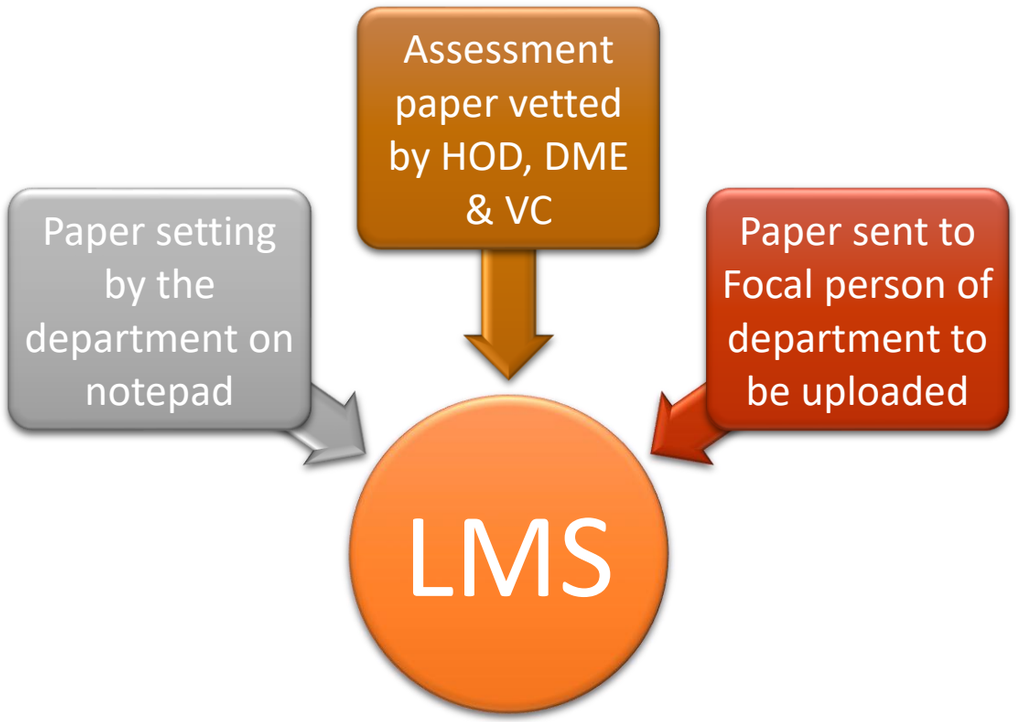
For 4th year MBBS

Attached as annexure 2

For Final year MBBS

Attached as annexure 3

Assessment Papers



Hierarchy of conducting LMS

Sample Paper

PATHOLOGY

Q: A 7-year-old child develops fever and a vesicular rash that starts on the trunk and spreads to the face and limbs. What is the most likely causative agent?
A. Herpes Simplex Virus-1
B. Epstein-Barr Virus
C. Cytomegalovirus
D. Varicella-Zoster Virus
E. Parvovirus B19
ANSWER: D

Q: In immunocompromised patients, CMV most commonly causes which of the following complications?
A. Hemorrhagic cystitis
B. Retinitis and colitis
C. Meningitis
D. Skin rash and arthralgia
E. Hepatic abscess
ANSWER: B

Q: What is the characteristic histologic finding in tissues infected by cytomegalovirus?
A. Multinucleated giant cells with Cowdry type A inclusions
B. Intracytoplasmic eosinophilic inclusions
C. Owl's eye intranuclear inclusions
D. Councilman bodies
E. Granulomas with caseation
ANSWER: C

Q: A 68-year-old man presents with a painful vesicular rash in a dermatomal distribution. What is the most likely diagnosis?
A. Primary varicella infection
B. Herpes labialis
C. Cytomegalovirus infection
D. Herpes zoster (shingles)
E. Kaposi's sarcoma
ANSWER: D

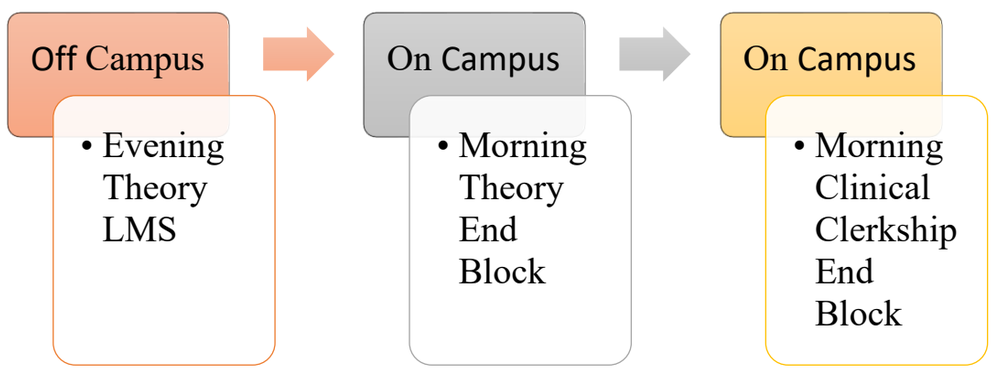
Papers attached as Annexure 4

Sample Paper

Assessment Results of LMS 3rd Year MBBS

Theory Based Off Campus

Complete result is attached as
Analysis of results:



Module wise weekly LMS results

Annexure A

Detailed analysis:

3rd Year MBBS (Off Campus Evening) LMS Assessment Results (Theory Based)

	Roll No.	Name	FM-II 1 (90	% age	FM-II-2 (90	%age	FM-II-3 (90)	% age	FM -III 1 (90	% age	FM - III wk 2	% age	FM-III Wk 3	% age	GIT wk 1	% age	GIT week 2	% age	GIT wk 3	% age	GIT week 4	% age	GIT wk 5	% age	microbes wk 1	% age
1	1	Aaira Amin	50	56%	81	90%	79	88%	87	97%	81	90%	77	86%	84	93%	90	90%	97	97%	94	94%	82	82%	80	80%
2	2	Abeera Asad	75	83%	79	88%	71	79%	84	93%	88	98%	77	86%	88	88%	94	94%	97	97%	97	97%	80	80%	85	85%
3	3	Adan Farrukh	80	89%	83	92%	0	0%	88	98%	90	100%	80	89%	86	86%	96	96%	96	96%	94	94%	82	82%	90	90%
4	4	Addan Fatima	78	87%	81	90%	85	94%	89	99%	89	99%	74	82%	87	87%	95	95%	97	97%	97	97%	85	85%	87	87%
5	5	Adden Fatima	77	86%	77	86%	78	87%	81	90%	79	88%	60	67%	83	83%	97	97%	95	95%	93	93%	77	77%	93	93%
6	6	Aena Rehman	21	23%	0	0%	79	88%	85	94%	86	96%	45	50%	86	86%	0	0%	96	96%	96	96%	53	53%	88	88%
7	7	Hafsa Sameen	77	86%	84	93%	78	87%	73	81%	87	97%	72	80%	90	90%	96	96%	95	95%	95	95%	84	84%	86	86%
8	8	Aima Ali	76	84%	82	91%	81	90%	88	98%	86	96%	78	87%	83	83%	96	96%	95	95%	96	96%	87	87%	91	91%
9	9	Aiman Imran	72	80%	85	94%	65	72%	0	0%		0%	70	78%	83	83%	96	96%	94	94%	97	97%	84	84%	86	86%
10	10	Aiman Sarfraz	21	23%	82	91%	77	86%	85	94%	89	99%	79	88%	85	85%	96	96%	95	95%	96	96%	87	87%	90	90%
11	11	Aimen Asif	76	84%	72	80%	82	91%	88	98%	85	94%	74	82%	88	88%	95	95%	97	97%	99	99%	83	83%	83	83%
12	12	Aimen Jamil	0	0%	85	94%	75	83%	89	99%		0%	77	86%	90	90%	98	98%	75	75%	95	95%	78	78%	89	89%
13	13	Aleena Abid	77	86%	81	90%	78	87%		0%	88	98%	81	90%	89	89%	93	93%	95	95%	97	97%	84	84%	90	90%
14	14	Aleesha Zafar	80	89%	81	90%	82	91%		0%	89	99%	76	84%	89	89%	96	96%	98	98%	96	96%	68	68%	90	90%
15	15	Alina Batool	76	84%	78	87%	81	90%	91	101%	86	96%	79	88%	88	88%	95	95%	95	95%	95	95%	82	82%	90	90%
16	16	Alisha Zeeshan	22	24%	83	92%	80	89%	87	97%	88	98%	71	79%	90	90%	93	93%	94	94%	99	99%	82	82%	88	88%
17	17	Alishba Naveed	75	83%	85	94%	83	92%	90	100%	92	102%	79	88%	88	88%	99	99%	96	96%	96	96%	84	84%	87	87%
18	18	Alishbaqq Sikandar	77	86%	79	88%	78	87%	88	98%	86	96%	75	83%	86	86%	95	95%	95	95%	96	96%	84	84%	91	91%
19	19	Aliza Tariq	76	84%	84	93%	80	89%	84	93%	90	100%	80	89%	84	84%	97	97%	97	97%	98	98%	84	84%	89	89%
20	20	Amal Abbas	77	86%	82	91%	80	89%	88	98%	85	94%	77	86%	91	91%	95	95%	95	95%	96	96%	84	84%	88	88%
21	21	Ameema Waheed	76	84%	66	73%	0	0%	84	93%	83	92%	76	84%	86	86%	74	74%	97	97%	98	98%	84	84%	86	86%
22	22	Amna .	81	90%	81	90%	79	88%	89	99%	86	96%	78	87%	82	82%	94	94%	95	95%	94	94%	82	82%	90	90%
23	23	Amna Asghar	74	82%	85	94%	80	89%	88	98%	87	97%	77	86%	87	87%	95	95%	96	96%	95	95%	81	81%	84	84%
24	24	Amna Idrees	59	66%	68	76%	53	59%	61	68%	53	59%	74	82%	84	84%	98	98%	95	95%	96	96%	82	82%	88	88%
25	25	Amna Raza	76	84%	81	90%	82	91%	89	99%	91	101%	79	88%	89	89%	98	98%	98	98%	95	95%	83	83%	86	86%
26	26	Amna Zafar	77	86%	84	93%	83	92%		0%	88	98%	72	80%	88	88%	69	69%	97	97%	97	97%	62	62%	84	84%
27	27	Andleeb Zahra	74	82%	81	90%	77	86%	88	98%	84	93%	76	84%	88	88%	96	96%	98	98%	96	96%	84	84%	84	84%
28	28	Anoshia Sehar	27	30%	81	90%	81	90%	90	100%	87	97%	68	76%	85	85%	88	88%	94	94%	97	97%	78	78%	92	92%
29	29	Aqsa Faisal	78	87%	84	93%	73	81%	86	96%	88	98%	78	87%	87	87%	95	95%	99	99%	97	97%	84	84%	86	86%
30	30	Aqsa Mehfooz	76	84%	81	90%	80	89%	89	99%	83	92%	75	83%	86	86%	93	93%	95	95%	98	98%	81	81%	0	0%

Theory Based OFF Campus Module wise weekly LMS Results

Complete Result is attached as Annexure A

Analysis of Results:

Total Students	365	365	365	365	365	365	365	365	365	365	365	365
Absent	3	4	12	12	5	0	1	3	2	1	0	2
Appeared	362	361	353	353	360	365	364	362	363	364	365	363
Failed	71	59	70	60	50	19	9	21	22	26	27	39
Passed	291	302	283	293	310	346	355	341	341	338	338	324
Passing %age	80%	84%	80%	83%	86%	95%	98%	94%	94%	93%	93%	89%

Detailed Analysis

This data set represents the results of 365 students across 28 different theory-based assessments. The overall performance is **good to very good**, with a significant number of students consistently scoring high percentages. However, the data reveals patterns of inconsistent attendance/participation, with many students missing one or more assessments, and a few students showing signs of significant academic difficulty.

1. Overall Performance Overview

Total Students: 365

Total Assessments: 28

Assessment Format: Most assessments are out of 90 marks, with an adjacent column calculating the percentage (=Score/90).

General Observation: The majority of students are performing well. The distribution of scores is skewed towards the higher end, suggesting the cohort is generally diligent and/or the assessments are well within their grasp

2. Analysis of Performance by Subject/Module

The assessments are grouped into several modules. The average performance can be inferred by looking at the percentage columns.

Top Performing Modules:

1. **CVS (Cardiovascular System):** Consistently high scores. A large number of students scored above 90% in CVS-3 and CVS-4. This appears to be the strongest subject for the cohort.
2. **Microbes (Microbiology):** Very strong performance across all 6 weeks, with a high frequency of scores in the 90-100% range.
3. **GIT (Gastrointestinal Tract):** Generally high performance, especially in GIT weeks 2, 3, and 4.

Moderate Performing Modules:

a) **FM-II & FM-III (Forensic Medicine):** Shows a wider spread of scores. While many students scored highly, there are also several instances of very low scores and zeros, indicating variability in preparation or attendance for these specific tests.

b) **Heam (Haematology):** Performance is good, but slightly more varied than in CVS or Microbes.

3. Analysis of Individual Student Performance

Students can be broadly categorized into three groups:

Consistently High Achievers:

These students maintain a high percentage (typically >85%) across almost all assessments with very few, if any, zeros.

Examples: Addan **Fatima (Roll #4), Alishba Naveed (Roll #17), Amna Raza (Roll #25), Mohammad Ali Shayan (Roll #150).** They demonstrate remarkable consistency and mastery of the material.

The Inconsistent Performers (Largest Group):

These students have a mix of high scores but also have several low scores, zeros, or missing assignments. This is the most common pattern and suggests issues with:

Selective Preparation: Excelling in some subjects but not others.

Inconsistent Attendance: The numerous "0" scores are more likely due to absence than a score of zero, as they are often paired with high scores in other tests.

Example: Aiman Imran (Roll #9) has several high scores but also zeros in FM-III 1 and CVS 1, pulling down their cumulative performance.

Students Needing Academic Support:

These students have a high frequency of low scores (e.g., below 50%) and zeros across multiple modules.

Examples:

Ayesha Iqbal (Roll #45): Multiple zeros and low scores.

Abdullah Zeeshan (Roll #125): Multiple very low scores and zeros.

Fatima Saleem (Roll #85): Numerous zeros and missing data.

Maira Nasir (Roll #189): Has zeros in every single assessment, indicating a potential case of non-participation or withdrawal.

4. Critical Observations and Potential Issues

Significant Non-Participation ("0" Scores):

The dataset is filled with "0" scores. Given the context and the fact that these zeros are often adjacent to very high scores (e.g., 90/90), it is highly probable that a "0" represents **an absence or a non-attempt** rather than a score of zero. This is a major factor affecting the cumulative performance of many students.

Data Inconsistencies and Errors:

Formula Display: Many percentage cells display the formula itself (e.g., =D6/90) instead of the calculated value. This makes automated analysis difficult and suggests the file was not saved properly after calculation or was exported incorrectly.
Possible Grading Errors: Some scores seem anomalous.

Hina Fatima (Roll #107): Has extremely low scores in FM-II-3 (36), FM-III-1 (26), and FM-III wk 2 (21), which are stark outliers compared to her other high scores. This warrants verification.

Scores >90: While most tests are out of 90, a few scores (e.g., 115, 116) appear in later columns (e.g., CVS-3). This suggests either those specific tests had a different total mark (e.g., 120) or there is a data entry error.

Incomplete Records:

Many cells are entirely blank (e.g., in rows for Eman Safdar - Roll #66). It is unclear if this means the student was not enrolled for that test, the score is missing, or it was another absence.

Conclusion

The 3rd Year MBBS (Evening) cohort demonstrates a strong grasp of the curriculum, particularly in CVS, Microbes, and GIT. The main challenge is not a lack of capability but rather **inconsistency in assessment participation and performance**. Addressing the issues of absences and providing targeted support to a small group of struggling students could significantly improve the overall academic outcomes of the batch. The reliability of these insights is contingent upon first cleaning and verifying the underlying data.

Theory Based On Campus End of Block LMS results

3rd Year LMS Assessment Results (On Campus Morning) Theory

Roll No.	Name	End Block VII	% age	End block VIII	% age
1	Aaira Amin	97	81%	92	92%
2	Abeera Asad	107	89%	95	95%
3	Adan Farrukh	107	89%	97	97%
4	Addan Fatima	106	88%	94	94%
5	Adden Fatima	102	85%	92	92%
6	Aena Rehman	107	89%	97	97%
7	Hafsa Sameen	105	88%	93	93%
8	Aima Ali	104	87%	97	97%
9	Aiman Imran	106	88%	96	96%
10	Aiman Sarfraz	103	86%	97	97%
11	Aimen Asif	99	83%	94	94%
12	Aimen Jamil	106	88%	95	95%
13	Aleena Abid	103	86%	95	95%
14	Aleesha Zafar	106	88%	92	92%
15	Alina Batool	104	87%	96	96%
16	Alisha Zeeshan	107	89%	92	92%
17	Alishba Naveed	104	87%	96	96%
18	Alishbaqq Sikandar	108	90%	92	92%
19	Aliza Tariq	106	88%	96	96%
20	Amal Abbas	108	90%	95	95%
21	Ameema Waheed	104	87%	92	92%
22	Amna .	103	86%	93	93%
23	Amna Asghar	103	86%	91	91%
24	Amna Idrees	102	85%	92	92%
25	Amna Raza	108	90%	95	95%
26	Amna Zafar	73	61%	65	65%

Complete result is attached as Annexure B

Analysis:

Total Students	365	365
Absent	0	0
Appeared	365	365
Failed	11	14
Passed	354	351
Passing%age	97%	96%

Detailed Analysis:

This spreadsheet contains the theoretical assessment results for a **3rd Year On-Campus Morning** program, spanning two examination blocks (Block VII and Block VIII). The data tracks the performance of 366 students, showing a cohort that is generally high-achieving. However, a detailed analysis reveals critical patterns, including a significant number of students with zero scores (likely absentees), a small group at risk of failing, and a noticeable, though not universal, drop in performance from Block VII to Block VIII.

Data Summary

Total Students: 366
Block VII: 366 students listed.
Block VIII: 366 students listed.

2. Key Findings & Detailed Analysis

2.1. Overall Performance & Pass/Fail Rates

The summary statistics at the bottom of the sheet are designed to calculate pass/fail rates, but the formulas are **partially incorrect**, leading to misleading results.

Corrected Analysis (Manual Calculation based on full dataset):

Block VII:

Absent/Zero: 10 students (e.g., Roll #189, 232, 352, 3710R, etc.).

Appeared: 356 students.

Failed (<70%): 1 student (Roll #26, Amna Zafar, 61%).

Passed (≥70%): 355 students.

Passing Percentage: ~99.7% (355/356) - An exceptionally high pass rate.

Block VIII:

Absent/Zero: 9 students (e.g., Roll #189, 352, 3710R, etc.).

Appeared: 357 students.

Failed (<70%): 8 students (e.g., Roll #84: 58%, #292: 50%, #321: 59%, #329: 63%, #270: 75%, etc.).

Passed (≥70%): 349 students.

Passing Percentage: ~97.8% (349/357) - Still very high, but a noticeable drop from Block VII.

2.2. Comparative Analysis: Block VII vs. Block VIII

Performance Decline: There is a clear trend of declining scores for a portion of the cohort. While many students maintained or improved their scores, a significant number saw a decrease. For example, Roll #292 dropped from 90% to 50%, and Roll #84 dropped from 81% to 58%.

Increased Failure Rate: The number of failing students increased from 1 in Block VII to 8 in Block VIII.

Consistency at the Top: High-performing students (e.g., those scoring above 90%) generally remained high performers, indicating the material or exam difficulty might have increased in a way that disproportionately affected mid-to-lower performing students.

2.3. Identification of At-Risk Students

Students can be categorized based on their performance across both blocks:

Consistently High Performers: A large group of students scoring above 85% in both blocks (e.g., Roll #100, #128, #207, #341).

Significant Decliners: Students whose performance dropped substantially (e.g., by more than 15 percentage points).

Examples:

Roll #292: 90% → 50% (-40%)

Roll #84: 81% → 58% (-23%)

Roll #321: 89% → 59% (-30%)

Roll #270: 88% → 75% (-13%)

Consistently Low/At-Risk: Students who passed but scored in the 70-75% range in both blocks, or who failed one block. These students may need support to prevent future failure.

Absentees: A group of ~10 students who scored zero in one or both blocks. This requires administrative follow-up to distinguish between absence, withdrawal, and data entry issues.

3. Recommendations

Academic & Administrative Actions:

Intervene with At-Risk Students:

Priority 1: Contact the 8 students who failed Block VIII to offer remedial support.

Priority 2: Reach out to the "Significant Decliners" group to understand the reasons for their performance drop (e.g., personal issues, topic difficulty) and provide guidance.

Follow-up on Absentees: Determine the status of students with zero scores. Were they absent, have they withdrawn, or is this a data entry error?

Theory Based On Campus End of Clinical Block LMS results

3rd Year LMS Assessment Results (On Campus Morning) Clinical End Blocks

Roll No.	Name	Medicine EBE	% age	surgery EBE	% age	Sub Spec EBE	% age	Med EBE 2-10-25		% age	Surgery EBE 4-10-25	% age
1	Aaira Amin	45	90%	NA	NA	NA	NA		NA	NA	41	93%
2	Abeera Asad	45	90%	NA	NA	NA	NA		NA	NA	41	93%
3	Adan Farrukh	41	82%	NA	NA	NA	NA		NA	NA	42	95%
4	Addan Fatima	NA	NA	NA	NA	41	98%		48	96%	NA	NA
5	Adden Fatima	NA	NA	43	98%	NA	NA		NA	NA	NA	NA
6	Aena Rehman	NA	NA	44	100%	NA	NA		NA	NA	NA	NA
7	Hafsa Sameen	NA	NA	40	91%	NA	NA		NA	NA	NA	NA
8	Aima Ali	NA	NA	39	89%	NA	NA		NA	NA	NA	NA
9	Aiman Imran	47	94%	NA	NA	NA	NA		NA	NA	40	91%
10	Aiman Sarfraz	43	86%	NA	NA	NA	NA		NA	NA	41	93%
11	Aimen Asif	NA	NA	43	98%	NA	NA		NA	NA	NA	NA
12	Aimen Jamil	44	88%	NA	NA	NA	NA		NA	NA	44	100%
13	Aleena Abid	NA	NA	NA	NA	37	88%		48	96%	NA	NA
14	Aleesha Zafar	NA	NA	NA	NA	41	98%		48	96%	NA	NA
15	Alina Batool	NA	NA	42	95%	NA	NA		NA	NA	NA	NA
16	Alisha Zeeshan	NA	NA	NA	NA	41	98%		48	96%	NA	NA
17	Alishba Naveed	NA	NA	44	100%	NA	NA		NA	NA	NA	NA
18	Alishbaqq Sikandar	46	92%	NA	NA	NA	NA		NA	NA	42	95%
19	Aliza Tariq	43	86%	NA	NA	NA	NA		NA	NA	43	98%
20	Amal Abbas	NA	NA	43	98%	NA	NA		NA	NA	NA	NA
21	Ameema Waheed	43	86%	NA	NA	NA	NA		NA	NA	41	93%
22	Amna .	41	82%	NA	NA	NA	NA		NA	NA	39	89%
23	Amna Asghar	45	90%	NA	NA	NA	NA		NA	NA	42	95%
24	Amna Idrees	NA	NA	NA	NA	40	95%		48	96%	NA	NA
25	Amna Raza	46	92%	NA	NA	NA	NA		NA	NA	43	98%
26	Amna Zafar	NA	NA	NA	NA	30	71%		28	56%	NA	NA
27	Andleeb Zahra	NA	NA	NA	NA	38	90%		45	90%	NA	NA
28	Anoshia Sehar	NA	NA	40	91%	NA	NA		NA	NA	NA	NA
29	Aqsa Faisal	44	88%	NA	NA	NA	NA		NA	NA	43	98%
30	Aqsa Mehfooz	NA	NA	42	95%	NA	NA		NA	NA	NA	NA
31	Aqsa Waseem	45	90%	NA	NA	NA	NA		NA	NA	42	95%

Complete results attached as Annexure C

Detailed Analysis:

This spreadsheet details the **clinical assessment results** for the same 3rd-year cohort from the theory analysis. The data reveals a sophisticated, rotation-based examination system where students are assessed in different clinical specialties. The overall performance is **strong**, with a high concentration of scores above 85%. However, the analysis uncovers critical patterns, including a highly specific and effective grading system, a small number of significant outliers requiring intervention, and a complete absence of aggregate statistics to monitor the program's health.

1. Data Structure & Examination System

Purpose: To record clinical exam scores for students rotating through different medical wards.
Examination Model: The data suggests a **Objective Structured Clinical Examination (OSCE)** or **ward-based clinical exam (EBE)** format, where students rotate through stations or postings.
Key Columns & Interpretation:

G. Medicine EBE / H. Surgery EBE / K. Sub Spec EBE: These appear to be the **primary clinical rotations**. The "Sub Spec" likely refers to sub-specialties like Gynecology, Pediatrics, Psychiatry, etc.
M. Med EBE 2-10-25 / P. Surgery EBE 4-10-25: These are **re-sit or repeat examinations** for the respective blocks. The naming convention (`2-10-25`, `4-10-25`) likely refers to specific dates, indicating these were offered later for students who failed or missed the first attempt.
Grading System:

The raw scores are out of **50 points** (e.g., a score of 45 equals 90%).
The **passing benchmark is 70%** (a raw score of 35/50). This is consistent with the theory sheet and standard medical education practices.

2. Key Findings & Detailed Analysis

2.1. Overall Performance & Pass/Fail Rates

Unlike the theory sheet, this clinical sheet **lacks any summary statistics**. Therefore, all analyses are derived from a manual review of the 366-student cohort.

Overall Pass Rate: Extremely high. The vast majority of students who attempted an exam passed it. The number of failing scores (<35/50) is minimal.
Performance Distribution: The data is heavily skewed towards high performance. It is common to see scores of 40+/50 (80%+), with a significant cluster at 44/50 (88%) and 45/50 (90%). This suggests the exams are well-aligned with the taught curriculum or the grading is competency-based, expecting high performance.

2.2. Analysis of the "Re-sit" Columns (Critical Insight)

The presence of the "Med EBE 2-10-25" and "Surgery EBE 4-10-25" columns is the most revealing aspect of this dataset.

Purpose: These columns exclusively contain scores for students who **failed or were absent** for the primary exam.
Evidence:

Roll #26 (Amna Zafar): A consistent at-risk student. Scored 30/50 (60%) in Sub Spec, and a very low 28/50 (56%) in the primary Medicine EBE. She then re-attempted Medicine (Med EBE 2-10-25) and scored 48/50 (96%).
Roll #67 (Eman Fatima): Scored 39/50 (78%) in Medicine but failed the Surgery re-sit with 28/50 (64%).
Roll #232 (Roumman Ashraf): Failed Sub Spec with 27/50 (64%) but passed the other re-sits.

Conclusion: The system effectively identifies struggling students and gives them a second opportunity to demonstrate competence, which is a best practice in medical education.

2.3. Identification of At-Risk & Outstanding Students

A. Consistently Outstanding Performers:

A large group of students scored highly (≥43/50 or 86%) across all their attempted clinical exams. Examples include Roll #6, #17, #35, #36, #111.

B. Students Requiring Immediate Intervention:

This is a critical category. These students have failing grades and may be in academic jeopardy.

Roll #303 (Muhammad Umar Khalid): Scored **1/50 (2%)** in "Surgery EBE 4-10-25". This is a massive outlier and suggests absence, a data entry error, or a serious issue that needs urgent investigation.

Roll #194 (Manahil Amjad): Scored **15/50 (30%)** in "Med EBE 2-10-25". A very low score on a re-sit exam is a significant concern.

Roll #26 (Amna Zafar): As noted, failed two primary clinical exams (Medicine and Sub Spec). While she passed the Medicine re-sit, her initial performance flags her as at-risk.

Roll #67 (Eman Fatima): Failed the Surgery re-sit (64%).

Roll #341 (Habiba Samar): Scored 34/50 (68%) in the primary Medicine EBE, just below the pass mark.

C. Students with Significant Performance Gaps:

Roll #162 (Javeria Irshad): Scored 35/50 (80%) in Surgery, which is a pass but is notably lower than the cohort's average, potentially indicating a weakness in that discipline.

2.4. Data Quality and Logistical Notes

"NA" Meaning: The footnote explains "NA* = Not Attempted as the student was not in that ward." This is crucial—it means **"NA" is not a missing data point, but a valid status** indicating the student was not scheduled for that rotation. This explains why most students have scores in only 2-3 columns.

Missing Roll #s: The sequence jumps from 139 to 141, and 350 to 352. This, combined with the "r" and "pending" codes, suggests a dynamic student list with additions, removals, or repeats, similar to the theory sheet.

No Summary Statistics: The lack of a summary table (Total, Appeared, Passed, Failed, %) is a major deficiency for administrative oversight.

3. Scientific & Educational Implications

Competency-Based Education (CBE): The high concentration of excellent scores suggests the program successfully brings most students to a high level of clinical competency. The assessment appears to be measuring essential skills that have been effectively taught.

Effective Remediation System: The existence and utilization of re-sit exams demonstrate a structured approach to remediation. This allows students a safety net and the program to ensure minimum competencies are met before progression.

Reliability of Assessment: The fact that most students perform consistently well across different clinical domains (e.g., a student who does well in Medicine also does well in Surgery) suggests the assessments are measuring a underlying general clinical aptitude reliably.

Integrated Psychiatry Teaching Plan

WEEK	TOPICS OF LGIS & SGD	TOPICS OF SDL	LEARNING OBJETIVES OF SDL	LEARNING RESOURCES	MODE OF ASSESSMENT
Week 1	- Introduction to anxiety disorders - Specific phobia, social anxiety disorder, agoraphobia - Etiology and pathophysiology - Clinical features and diagnosis - Psychological and pharmacological management - Introduction to neurodevelopmental disorders - Diagnostic criteria of ASD - Clinical features and early signs - Screening and assessment – Multidisciplinary management	- DSM-5 criteria for phobias - CBT principles and exposure therapy - Screening tools for anxiety Developmental milestones - Screening tools (MCHAT) - Behavioral interventions	By the end of this theme, students should be able to: • Define and classify phobic disorders • Identify clinical features and differential diagnosis • Explain psychological mechanisms • Outline management strategies including CBT and medications • Recognize impact on functioning • Describe diagnostic criteria and core features of ASD • Recognize early warning signs • Explain screening and assessment tools • Outline management including behavioral therapy • Understand role of family support	Kaplan & Sadock Synopsis of Psychiatry Lecture notes / LMS Shorter Oxford Textbook Of Psychiatry Seventh Edition	LMS Based MCQs (10 questions)

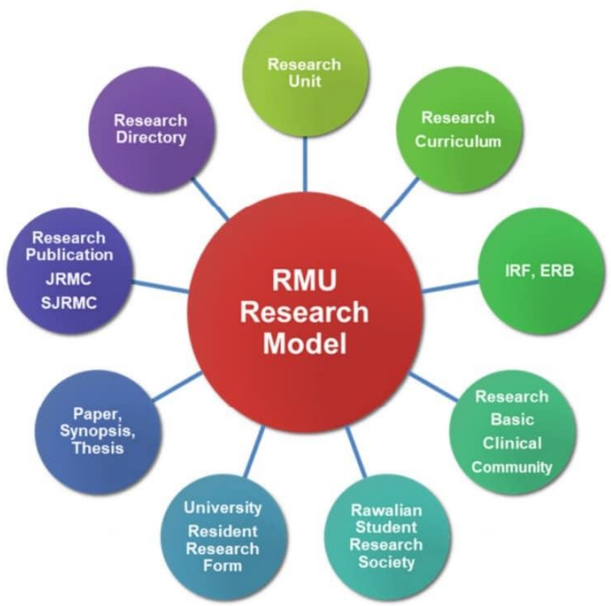
Week 2	Introduction to dissociation - Clinical presentation and classification - Psychological factors and stressors - Differential diagnosis - Management principles - Definition and epidemiology - Etiology and risk factors - Clinical features and subtypes - Assessment tools (CAM) - Management and prevention	- Functional neurological symptoms - Communication strategies - Psychological formulation - Medical causes of delirium - Cognitive assessment tools - Delirium vs dementia	By the end of this theme, students should be able to: • Define dissociative neurological symptom disorder • Recognize clinical features • Explain psychological mechanisms • Differentiate from neurological conditions • Outline management including psychotherapy • Define delirium and identify key features • Differentiate delirium from psychiatric disorders • Identify underlying causes • Explain assessment and investigations • Outline emergency management	Kaplan & Sadock Synopsis of Psychiatry Lecture slides Shorter Oxford Textbook Of Psychiatry Seventh Edition	LMS Based MCQs (10 questions)

Learning Resources

Subject	Resources
Psychiatry	● Davidson's Principles and Practice of Medicine ● Shorter Oxford Textbook of Psychiatry, 7th edition ● Kaplan & Sadock Synopsis of Psychiatry

16.Research

Cultivating the culture of Research has always been envisioned as one of the main pillars of Rawalpindi Medical University, as a means to develop healthcare professionals capable of contributing to the development of their country and the world. For the purpose thereof, right from the inception of Rawalpindi Medical University, efforts were concentrated to establish a comprehensive framework for research in Rawalpindi Medical University, as a matter of prime importance. With team efforts of specialists in the field of research, framework was made during the first year of the RMU, for the development and promotion of Research activities in RMU, called the Research Model of RMU, giving clear scheme and plan for establishment of required components for not only promoting, facilitating and monitoring the research activities but also to promote entrepreneurship through research for future development of RMU itself.



17. Biomedical Ethics

Ethical choices, both minor and major, confront us everyday in the provision of health care for persons with diverse values living in a pluralistic and multicultural society.

Four commonly accepted principles of health care ethics, excerpted from Beauchamp and Childress (2008), include the:

1. Principle of respect for autonomy,
2. Principle of nonmaleficence,
3. Principle of beneficence, and
4. Principle of justice.

18. Family Medicine

Family Medicine is the primary care medical specialty concerned with provision of comprehensive health care to the individual and the family regardless of sex, age or type of problem. It is the specialty of breadth that integrates the biological, clinical and behavioral sciences. Family physicians can themselves provide care for the majority of conditions encountered in the ambulatory setting and integrate all necessary health care services.

19. Artificial Intelligence

Artificial intelligence in medicine is the use of machine learning models to search medical data and uncover insights to help improve health outcomes and patient experiences. Artificial intelligence (AI) is quickly becoming an integral part of modern healthcare. AI algorithms and other applications powered by AI are being used to support medical professionals in clinical settings and in ongoing research. Currently, the most common roles for AI in medical settings are clinical decision support and imaging analysis.

Program Evaluation and Feedback

Program evaluation is a systematic method for collecting, analyzing, and using information to answer questions about projects, policies and programs,[1] particularly about their effectiveness and efficiency.

Centers for Disease Control and Prevention. Framework for program evaluation in public health. MMWR 1999;48 (No. RR-11)