RMU – 12

Integrated Modular

MBBS Curriculum 2026

Isolation to Beyond Boundaries

Study Guide

Department of Medical Education

Anesthesia

2026

Fourth Year MBBS

Rawalpindi Medical University

Department of Anaesthesia

Integrated Modular Curriculum
4th year MBBS

	Rawalpindi Medical University			
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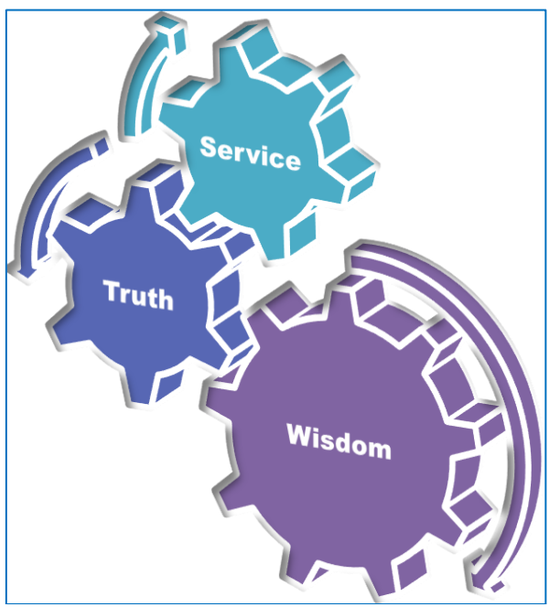
SECTION – 1

INTRODUCTION

Curriculum Mission and Vision

RMU

Motto



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 centre 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

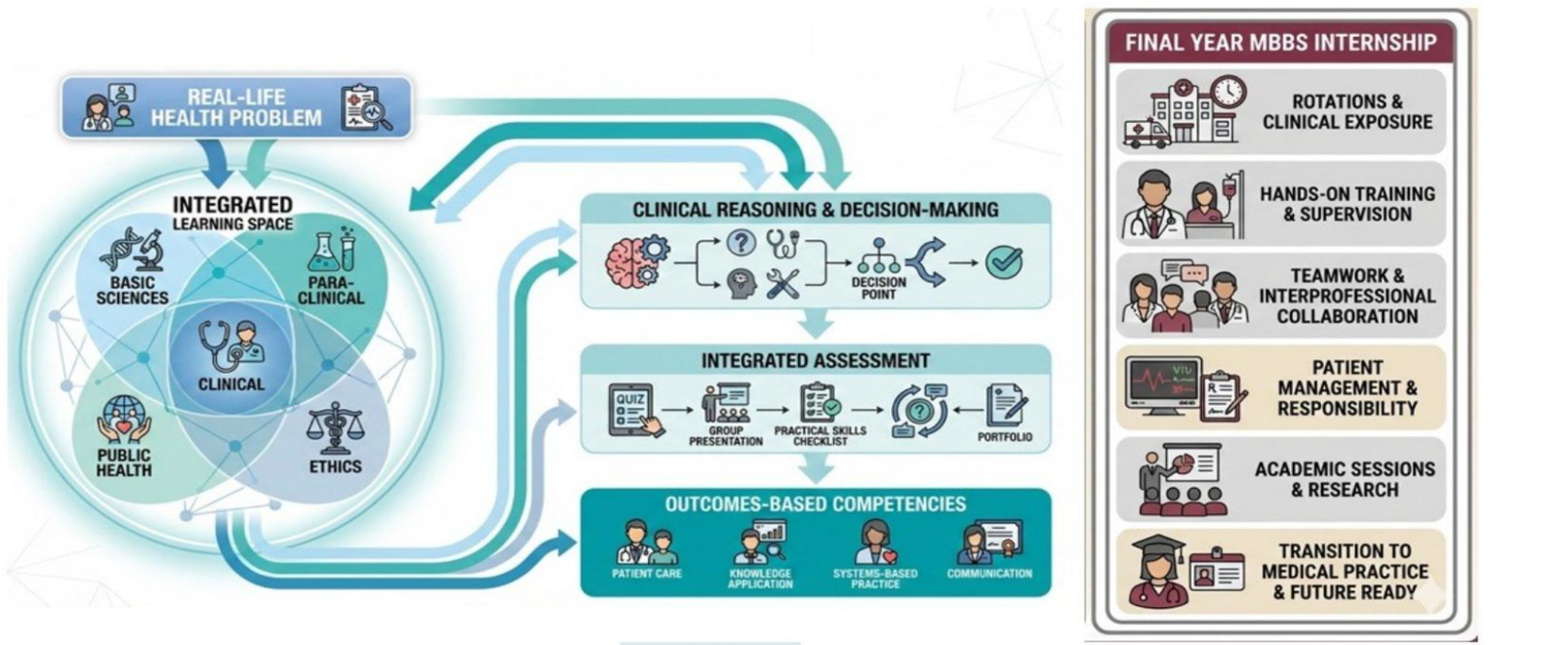
References

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

RMU

Harden Level 11

Harden Level 10

Harden Level 9

Harden Level 8

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.

MBBS Year 5

MBBS Year 3&4

S Year 1&2

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

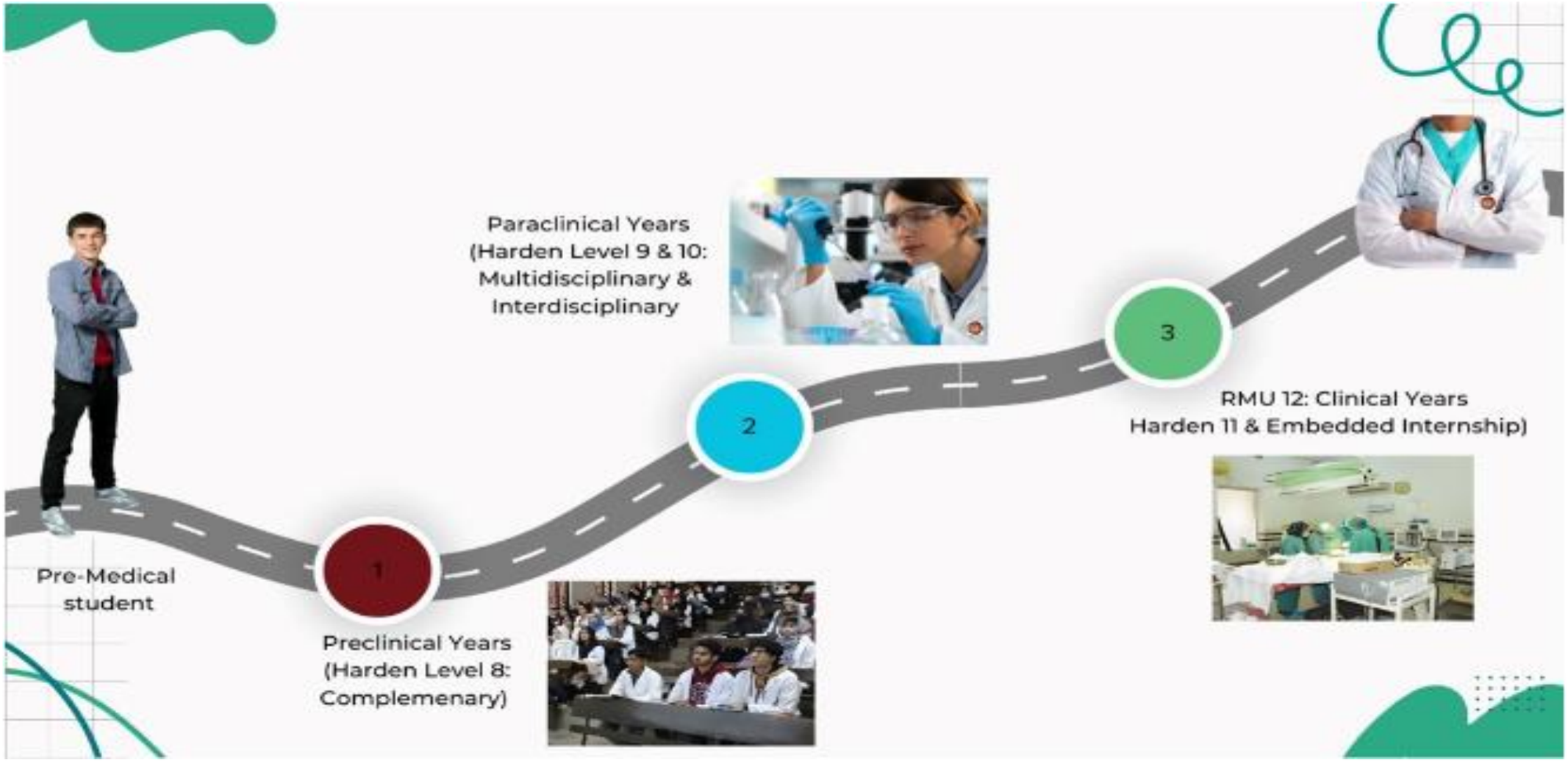
The Undergraduate Internship is a structured, supervised transition phase designed to consolidate clinical competence and ensure readiness for the statutory house job. It provides learners with protected, workplace-based exposure focused on authentic patient care tasks, guided by clearly defined Entrustable 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

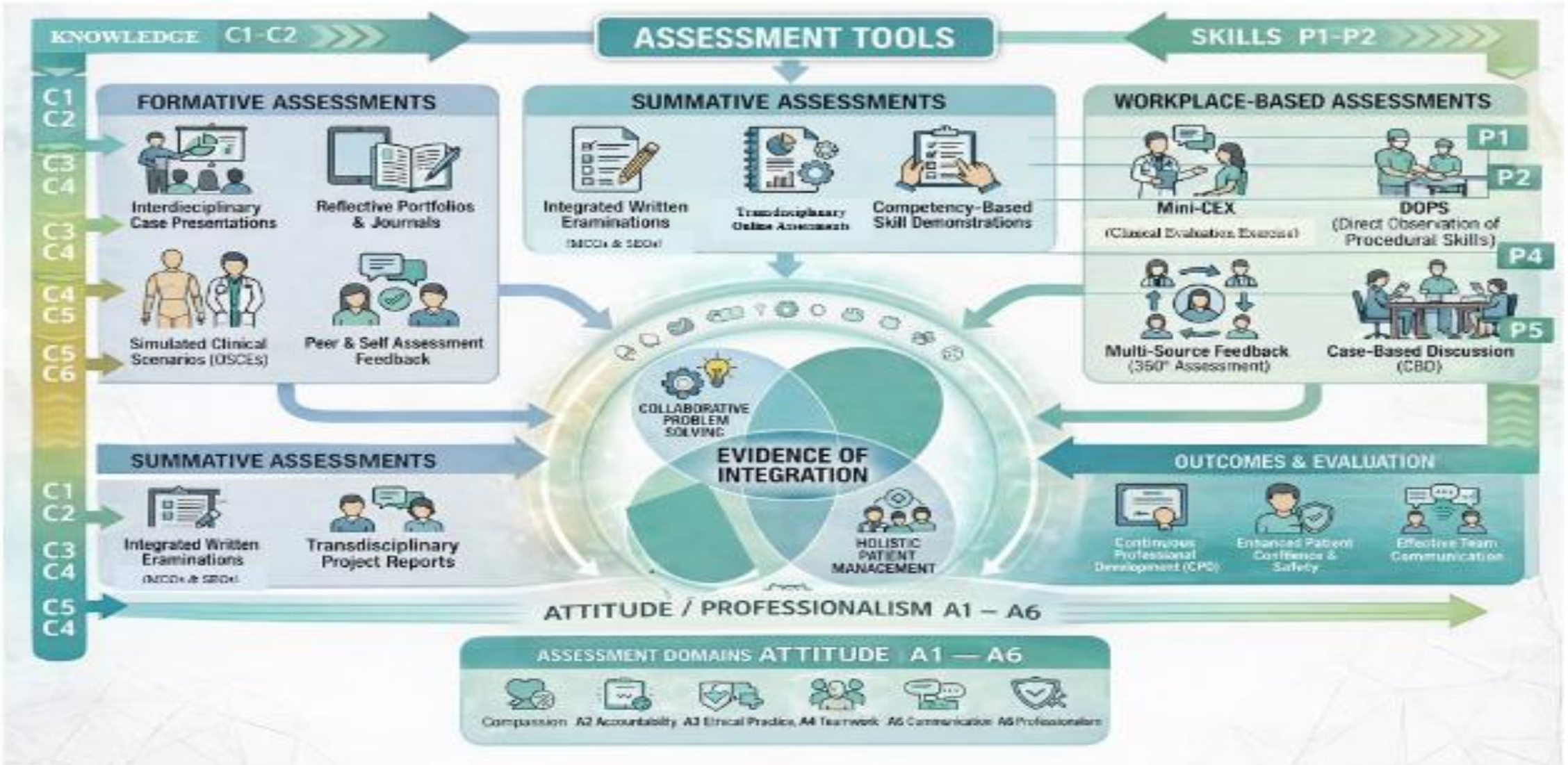
real clinical environments. This integrated and progressive design reflects contemporary best practices in medical education and aligns the educational experience with the expectations of modern healthcare systems.

Structured Framework of RMU – 12 Integrated Modular MBBS Curriculum 2026

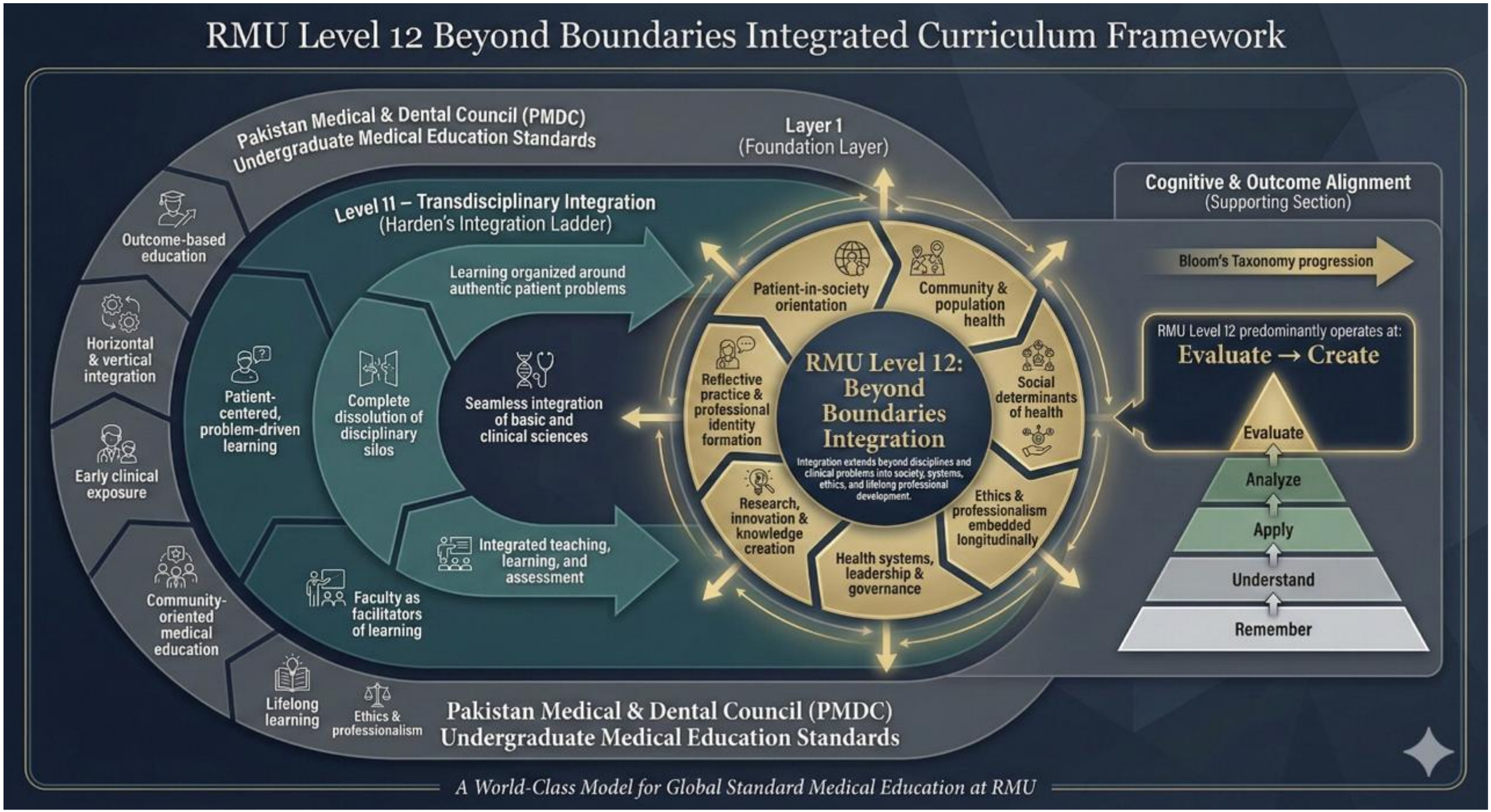
Isolation to Beyond Boundaries



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



RMU Level 12 Beyond Boundaries Integrated Curriculum Framework



RMU Level 12 Trans-Contextual Integration Framework

Introduction

Modern medical education emphasizes integration as a cornerstone for producing competent, reflective, and patient-cantered 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 fulfils 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

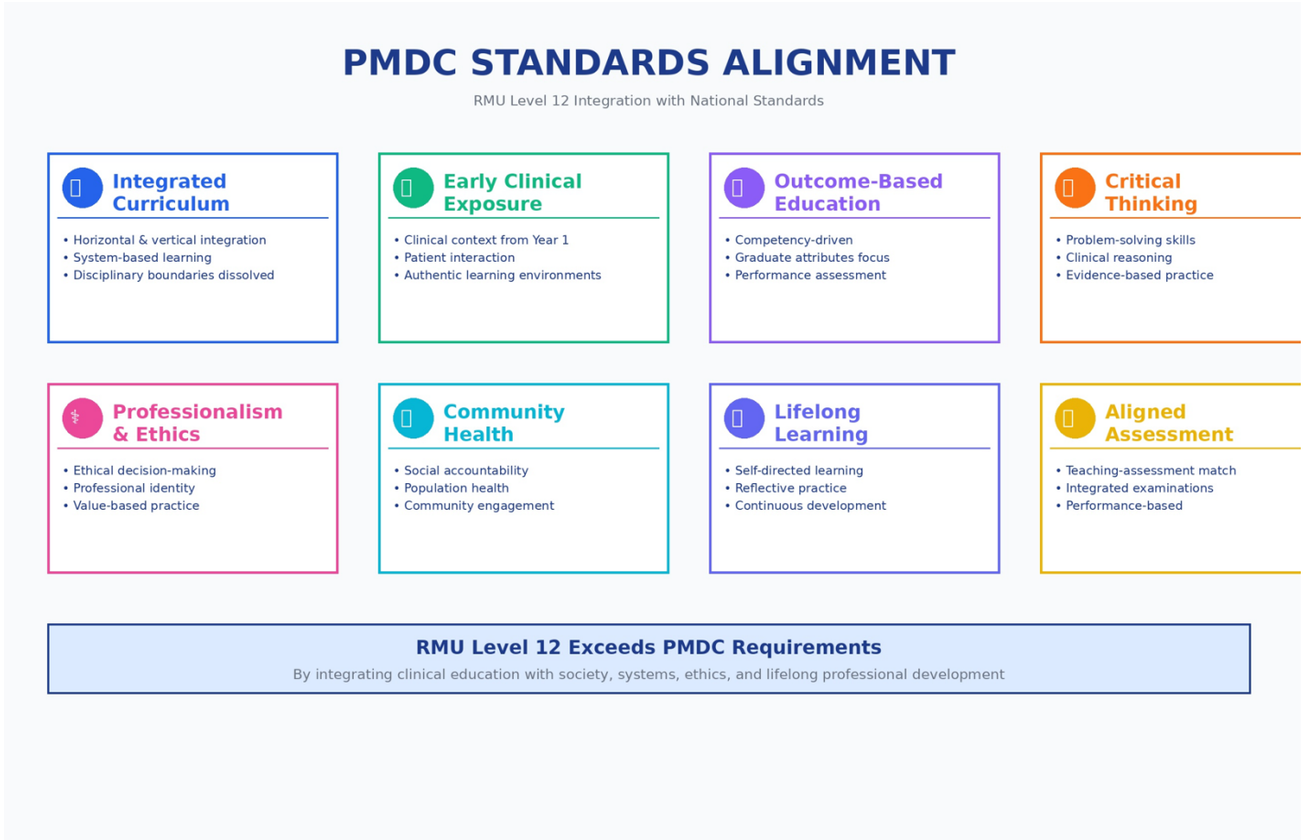
- Transcends Harden's Level 11 through integration with society, systems, ethics, and lifelong learning
- Fully aligned with PMDC undergraduate medical education standards
- Emphasizes higher-order thinking: Analysis, Evaluation, and Creation (Bloom's Taxonomy)
- Produces socially accountable, adaptive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

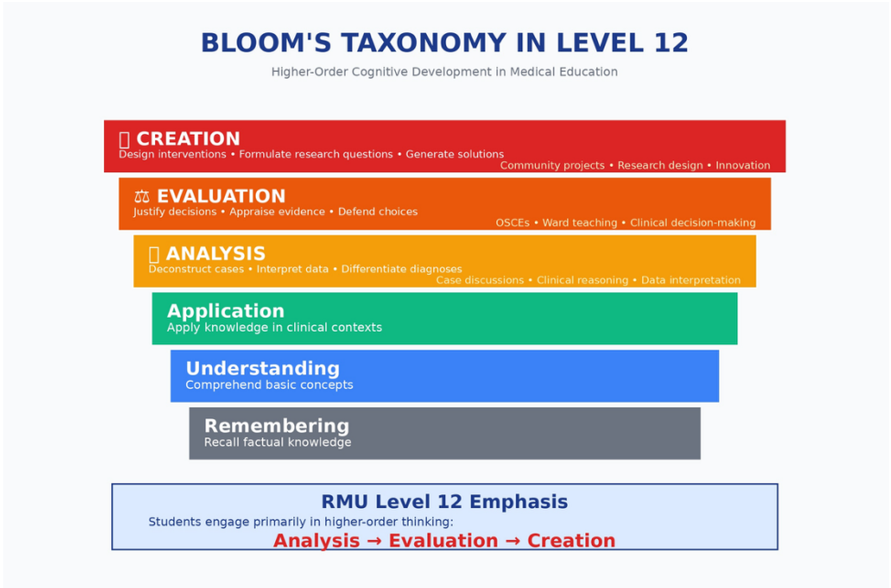
4. Bloom's Taxonomy & Higher-Order Thinking

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

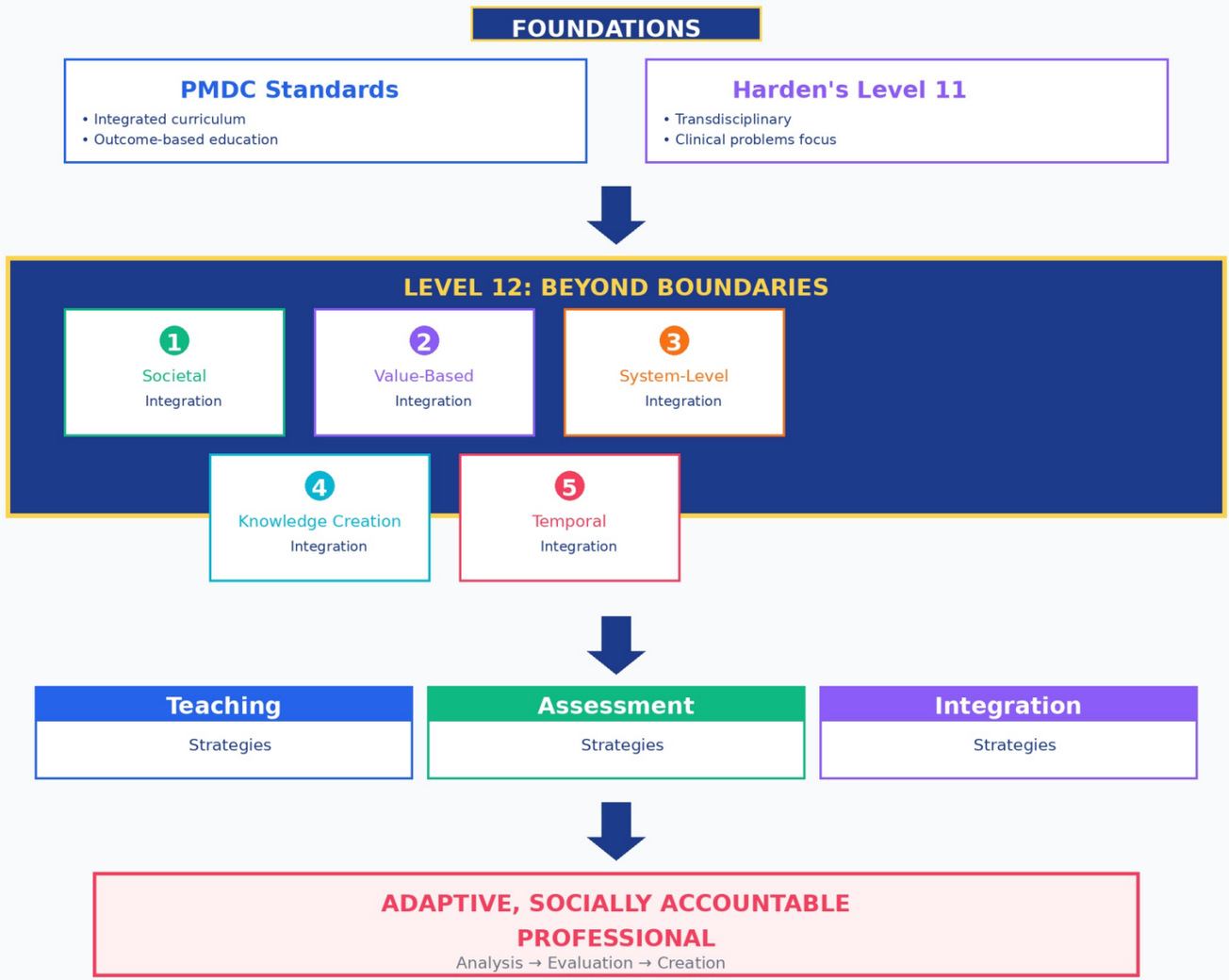
Lifelong Learning
- Self-directed growth
- Reflective practice
- Adaptive expertise

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.

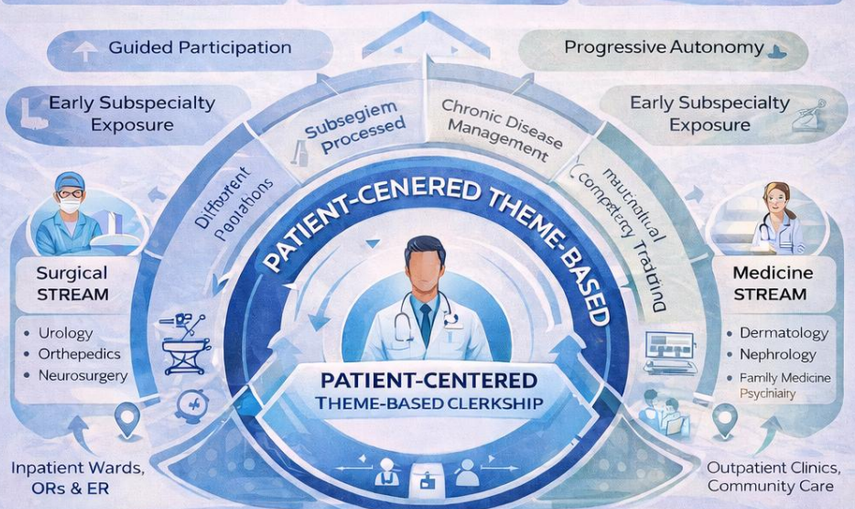
Key Takeaways for Educators

- 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:

- Anaesthesia
- Orthopaedics
- 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:

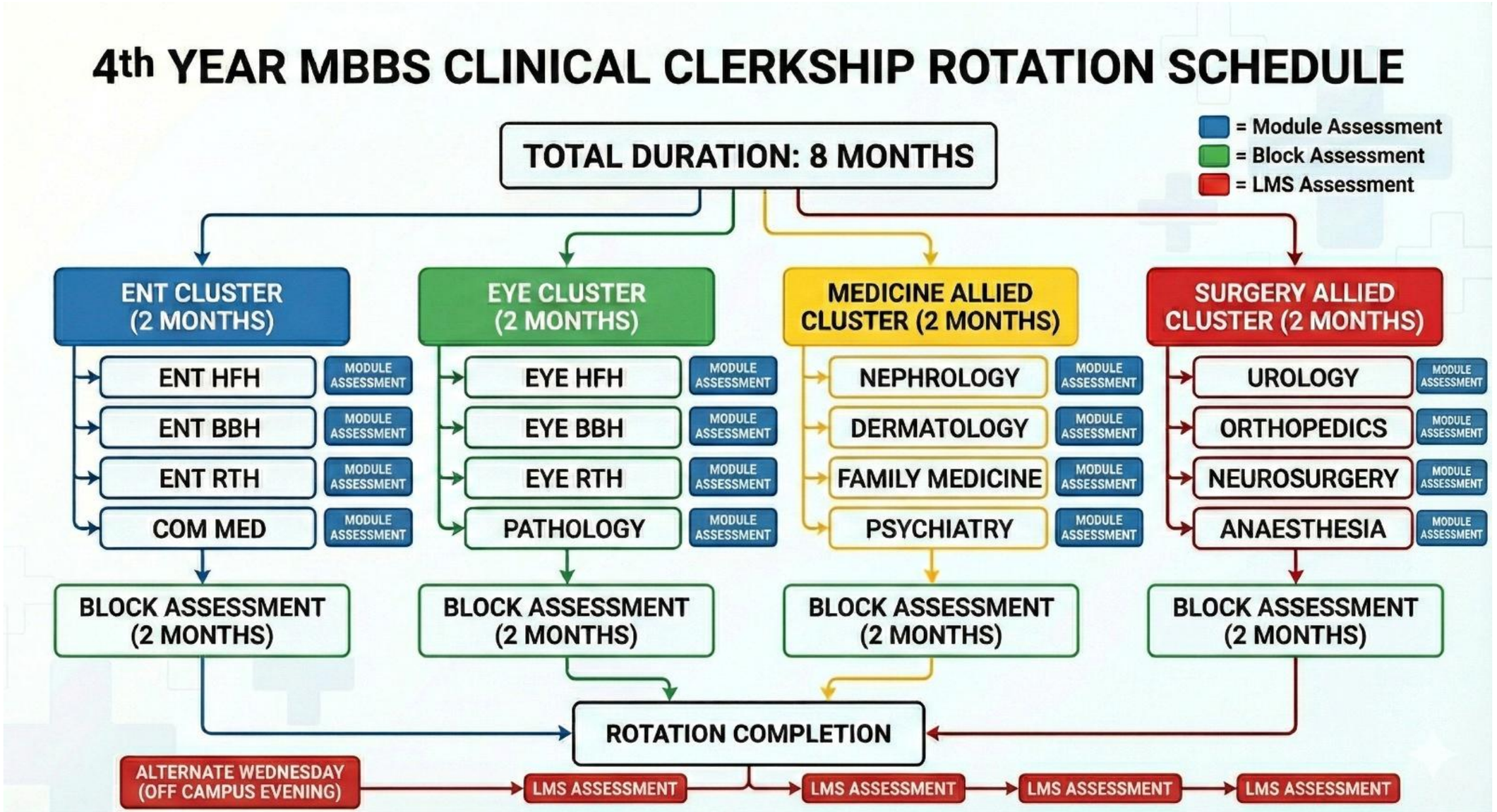
- Clinically competent
- Adaptable
- Ethical
- Reflective
- Team-oriented
- Prepared for increasing responsibility in final year and house job

Anaesthesia Block Team

Block Name : **Anaesthesia Block**
Duration of module : **02 Weeks**

	Block Committee			Block Task Force Team	
1.	Vice Chancellor RMU	Prof. Dr. Muhammad Umar	1	Coordinator	Dr. Waqas Anjum
			2	Co-Coordinator	Dr. Sehrish, Dr. Maria
2.	Director DME	Prof. Dr. Rai Muhammad Asghar	3	DME Focal Person	Dr. Maryum Batool
3.	Convener Curriculum	Prof. Dr. Naeem Akhter			
4.	Dean Surgery	Prof. Dr. Waqas Raza			
5.	Additional Director DME	Prof. Dr. Ifra Saeed			
6.	Chairperson / HOD Anaesthesia	Dr Jawad Zaheer			
7.	Chairperson Community Medicine	Associate Prof Dr Khola		**DME Implementation Team**	
			1.	Director DME	Prof. Dr. Rai Muhammad Asghar
8.	Focal Person Anaesthesia	Dr Waqas Anjum	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

4th YEAR MBBS CLINICAL CLERKSHIP ROTATION SCHEDULE



4th Year MBBS Clinical Clerkship

Surgery Allied

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

Medicine Allied

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

ENT Cluster

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

EYE Cluster

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

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

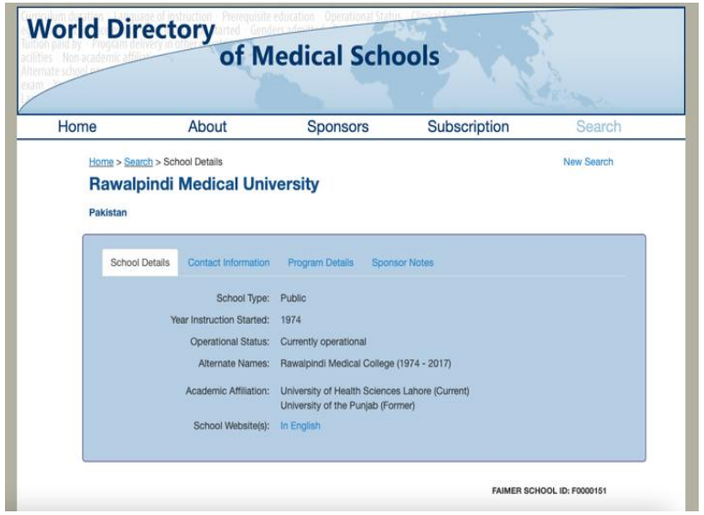
Reference Documents

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..

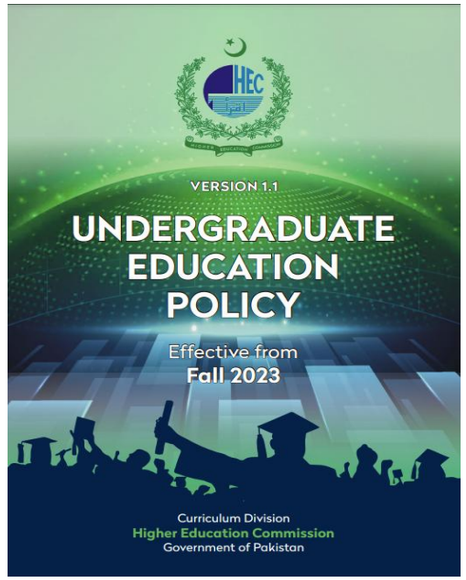
https://wfme.org/wp-content/uploads/2020/12/WFME-BME-Standards-2020.pdf



2022

GUIDELINES
FOR

UNDERGRADUATE
MEDICAL EDUCATION
CURRICULUM (MBBS)



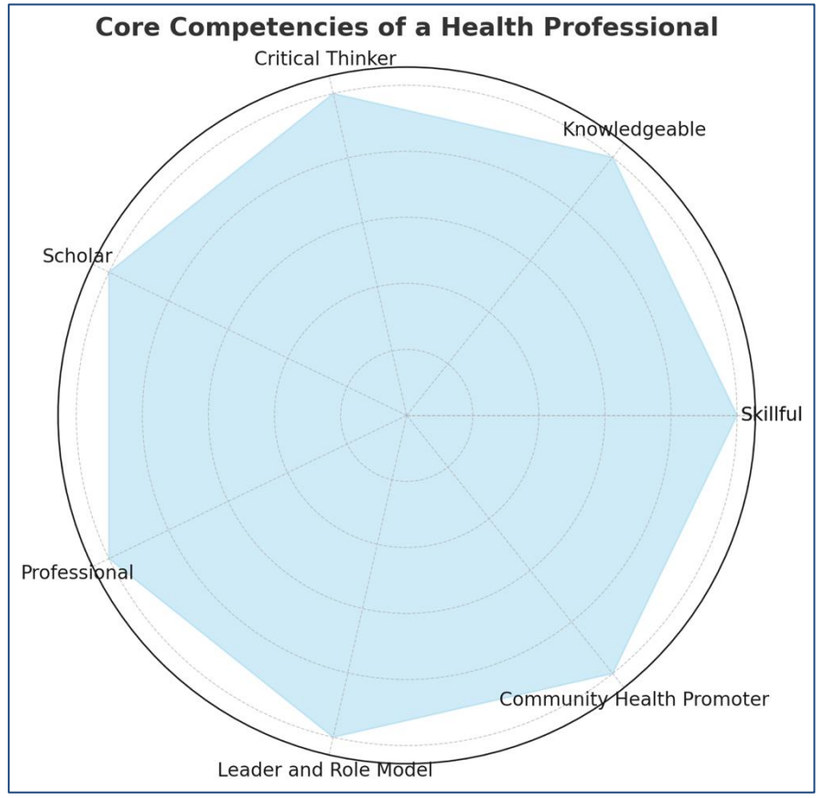
https://pmc.gov.pk/Documents/Examinations/Guidelines%20for%20Undergraduate%20Medical%20Education%20Curriculum%20(MBBS).pdf

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.

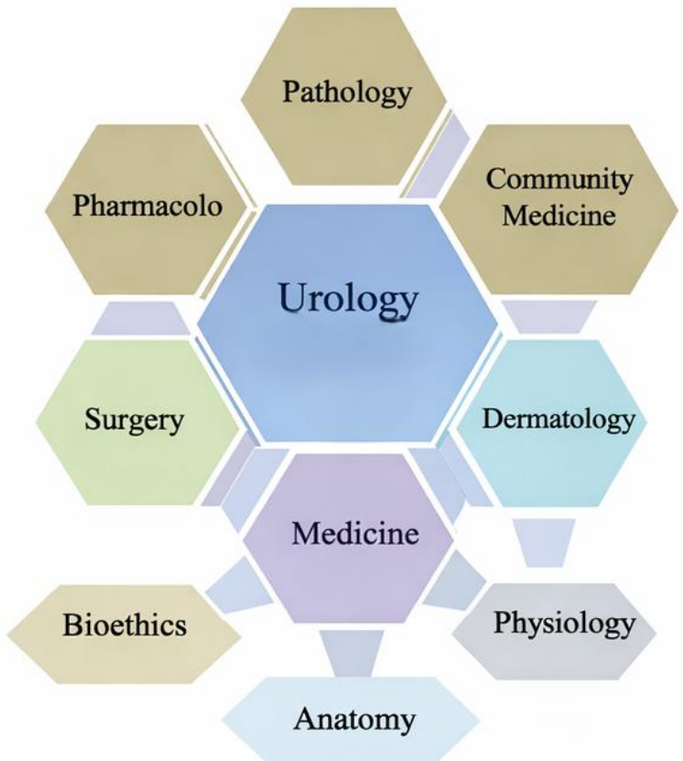
7. Leader and Role Model

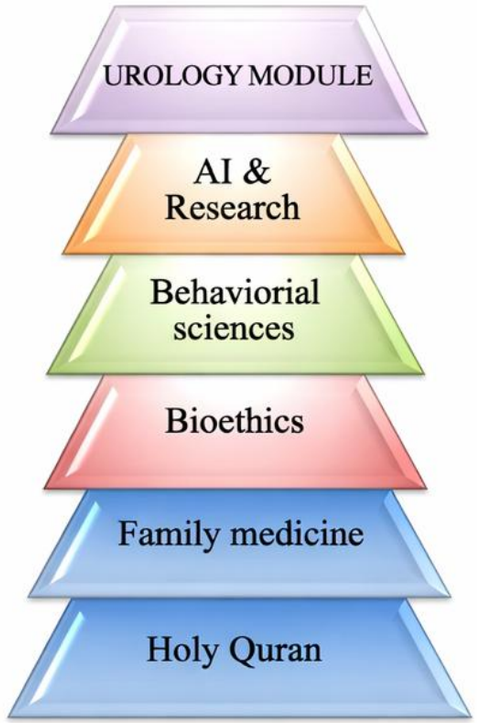
Demonstrates exemplary conduct and leadership potential in a. advancing healthcare b. enhancing medical education c. initiating, participating in and adapting to change, using scientific evidence and approaches d. Enhancing the trust of the public in the medical profession by being exceptional role model 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 Urology Block / Spirally Integrated Disciplines

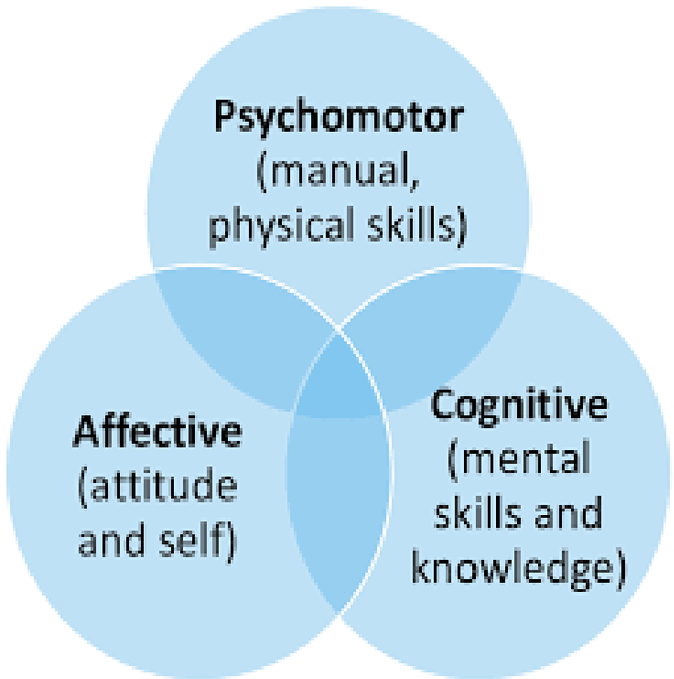




Study Guide: Terms & Abbreviations

Contents

Tables & Figures



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-II

Teaching and Learning Strategies

Teaching and Learning Strategies

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.

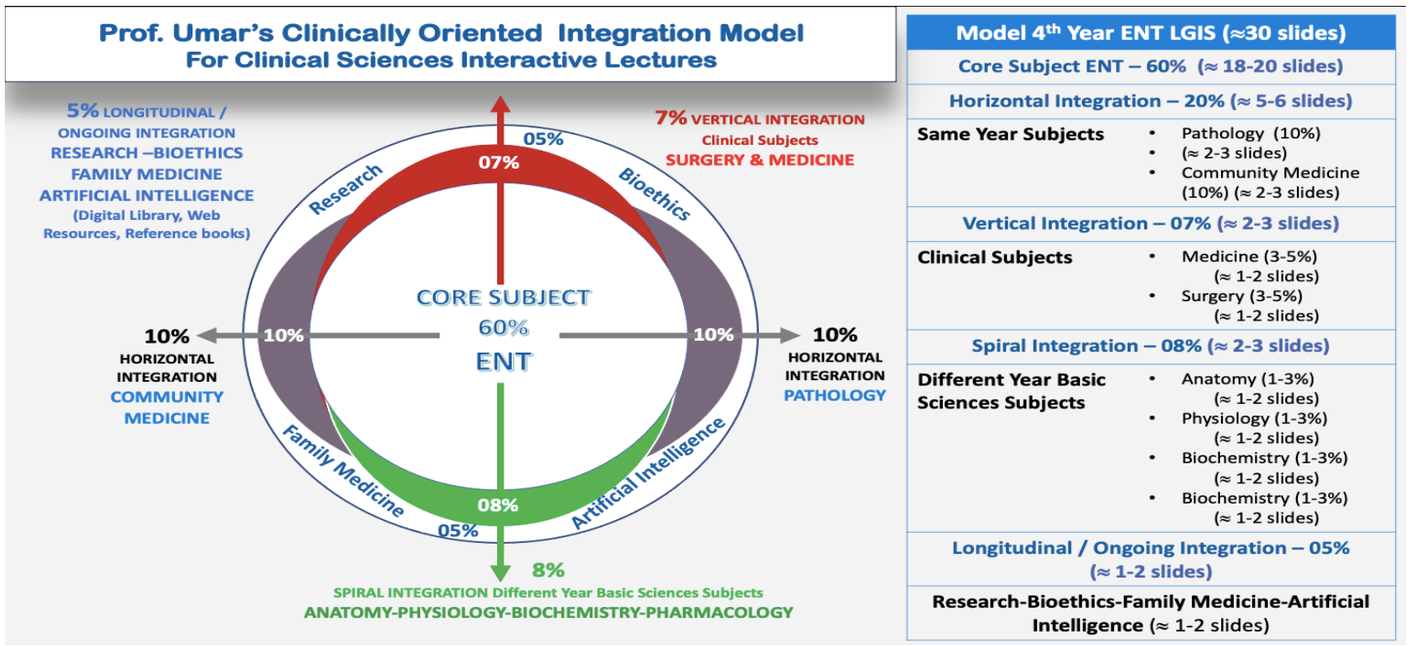


Figure 1. Prof Umar's Model of Integrated Lecture

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

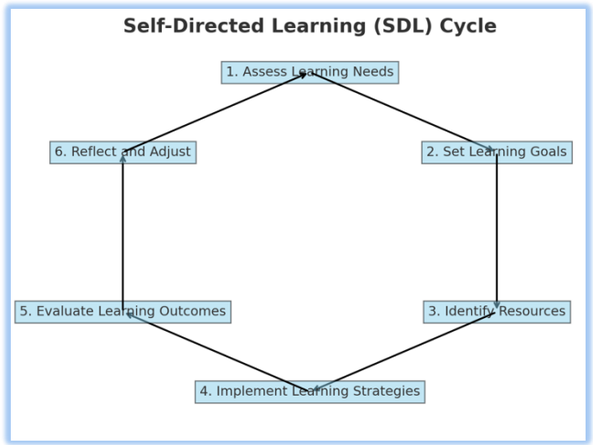
S.No	Topics	Approximate %
1	Title Of SGD	
2	Learning Objectives from Study Guides	
3	Horizontal Integration	5%+5% = 10%
4	Core Concepts of the Topic	70%
5	Vertical Integration	10%
6	Related Advance Research points	3%
7	Biomedical Ethical points	2%
8	Spiral integration	5%

Table 3. Steps of taking Small Group Discussions

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)

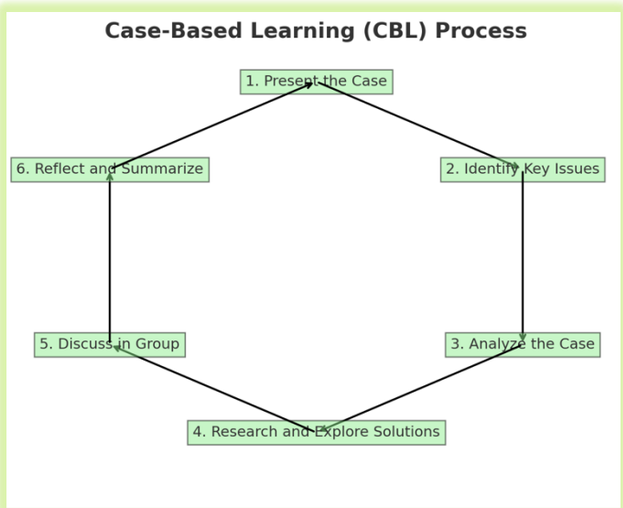
  ii. OSPE station



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-III

Themes & Learning Objectives

Clinico Connect- (Transdisciplinary Clinical Reasoning Forum)

Learning Objectives, Themes, Transdisciplinary Joint sessions

Contents

Symptom-Oriented Integrated Clinical Clerkship (SOICC) Anesthesia

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 ANAESTHESIA CLINICAL CLERKSHIP PROGRAM

The 4th Year MBBS **ANAESTHESIA** Clinical Clerkship is structured around five high-frequency clinical themes: **Pre-operative Assessment, Airway Management, Acute Pain Management, Perioperative Monitoring, and Resuscitation/Critical Care**. This thematic, patient-centred design reflects authentic clinical practice, where the focus is on patient safety and physiological optimization during the perioperative period.

This model promotes the development of clinical reasoning by encouraging students to construct "fitness scripts" based on patient comorbidities, differentiate routine cases from high-risk surgical candidates, and identify "red-flag" physiological signs requiring urgent intervention or optimization. The structure supports hypothesis-driven risk assessment rather than rote memorization. The clerkship operates within a workplace-based, competency-driven framework. Students progressively advance from foundational skills, such as bag-mask ventilation and IV access, to integrated perioperative decision-making across the Operating Theatre (OT), Intensive Care Unit (ICU), and Pre-anaesthesia Clinic. The spiral progression ensures increasing complexity and refinement of life-saving skills in real-time clinical environments.

Educationally, the program aligns with:

- **Harden's Integration Ladder (Levels 9–11):** Integrating pharmacology and physiology with clinical anaesthetic practice.
- **Miller's Pyramid:** Progressing from "Knows How" (Anaesthetic plan) to "Shows How" (Airway manoeuvres) and "Does" (Basic life support under supervision).
- **Competency-Based Medical Education (CBME):** Focused on observable clinical competencies in the OT setting.
- **Patient-Centred Care:** Emphasizing informed

GENERAL LEARNING OBJECTIVES

ANAESTHESIA Integrated Clinical Clerkship (4th Year MBBS)

By the end of the 6-week clerkship, students will be able to:

Learning Objective	Competency Type	Domain Description
Focused Pre-op History	Psychomotor / Cognitive	Focused history (allergies, comorbidities, fasting) backed by clinical knowledge.
Airway & Physical Exam	Psychomotor (P)	Skill to perform Mallampati scoring, thyromental distance, and cardiopulmonary assessment.
Risk Stratification	Cognitive (C)	High-level synthesis to assign ASA Physical Status and predict perioperative risk.
Difficult Airway Recognition	Cognitive (C)	Pattern recognition of anatomical features predicting difficult ventilation or intubation
Emergency Recognition	Cognitive (C)	Rapid assessment of Anaphylaxis, Laryngospasm, or Malignant Hyperthermia.
Investigation Planning	Cognitive (C)	Ordering and interpreting relevant tests (ECG, Labs, CXR) for surgical fitness.
	Cognitive (C)	Knowledge of General vs. Regional anesthesia protocols and fluid management.
Referral for Optimization	Cognitive / Affective	Identifying when a patient requires cardiology or pulmonology clearance for safety.
Pharmacological Stewardship	Cognitive / Affective	Safe use of controlled substances (opioids) and antibiotic prophylaxis
OT Skills/Procedures	Psychomotor (P)	Hands-on participation in IV cannulation, bag-mask ventilation, and monitoring setup.
Informed Consent	Affective / Psychomotor	Communicating anaesthetic risks and benefits with empathy and clarity.
Post-Op Complications	Affective (A)	Sensitive communication regarding post-operative pain or unexpected ICU admission.
Ethics & Professionalism	Affective (A)	Maintaining conduct and sterile discipline within the Operating Theater.
Basic Science Integration	Cognitive (C)	Applying knowledge of autonomic pharmacology and respiratory physiology to patient care.
The	Affective (A)	Interpersonal skills and effective communication

consent, patient safety, and post-operative comfort. • .	**Surgical Team**		within the multidisciplinary OT team.

Theme	Core Competency Emphasis
Theme 1 – Patient presenting for Pre-Anesthesia Assessment	History + Pre-operative evaluation + Physical examination skills + Airway assessment + Risk stratification + ASA classification + Optimization of comorbidities + Informed consent
Theme 2 – Airway Management	Airway assessment + Identification of difficult airway + Bag mask ventilation + Laryngoscopy + Endotracheal intubation + Supraglottic airway devices + Difficult airway algorithm + Emergency airway management
Theme 3 – Perioperative Care	Pre-medication + Induction of anesthesia + Maintenance of anesthesia + Monitoring (ECG, SpO_2, BP, $EtCO_2$) + Fluid management + Analgesia + Patient safety + Crisis management
Theme 4 – Postoperative Complications	Post-anesthesia recovery assessment + Airway complications + Postoperative nausea and vomiting (PONV) + Pain management + Respiratory depression + Hemodynamic instability + Delayed recovery

WEEK 1 – THEME 1 & 2

Pre-Anaesthesia Assessment & Airway Management

Day	Clinical Case	Core Teaching Points	Harden Integration Level	Multidisciplinary	Skills	Attitude
Day 1	55-year-old patient for Elective Hernia Surgery	Components of pre-anesthesia assessment, ASA classification, optimization of co-morbidities, fasting guidelines	Level 1–4: Applied Anatomy & Physiology;	Anaesthesia, Medicine, Physiology	Focused pre-anesthesia history, ASA classification	Professional Communication
Day 2	Obese patient with difficult airway	Airway anatomy, Mallampati classification, predictors of difficult airway	Level 7–8: Clinical reasoning	Anaesthesia, Anatomy	Airway assessment, Mallampati grading	Patient safety awareness
Day 3	Emergency Trauma patient requiring rapid sequence induction	Induction agents, Muscle relaxants, airway protection	Level 9–10: Integration	Anaesthesia, Emergency Medicine	Bag-Mask ventilation, intubation steps	Calm emergency handling
Day 4	Diabetic hypertensive patient scheduled for laparoscopic cholecystectomy	Anesthesia planning according to co-morbidly risk stratification, airway plan & peri operative monitoring	Level 10–11: Management planning	Anaesthesia + Surgery+ Medicine	Case presentation	Ethical decision making

Specialty	Skill-Based Clerkship Learning Outcomes (LOs)
Anaesthesia (Primary Discipline)	Perform focused pre-anesthesia history and examination, assign ASA classification, conduct airway assessment (Mallampati, mouth opening, thyromental distance, neck mobility), identify predictors of difficult airway, demonstrate bag-mask ventilation, recognize steps of endotracheal intubation, identify airway equipment, and interpret standard monitoring (ECG, SpO_2, NIBP, $EtCO_2$).
Medicine	Identify perioperative risks associated with hypertension, diabetes mellitus, obesity and obstructive sleep apnoea, evaluate cardiovascular and respiratory status, interpret vital signs and basic investigations, and recognize the need for preoperative optimization of comorbid conditions.
Physiology	Explain physiology of respiration and oxygen transport, mechanisms of airway obstruction, effects of anaesthetic drugs on cardiovascular and respiratory systems, and physiological basis of oxygen saturation and ventilation monitoring.
Anatomy	Describe upper airway anatomy, structures relevant to laryngoscopy and intubation, anatomical basis of difficult airway, and landmarks used for airway assessment.
Surgery	Recognize importance of preoperative evaluation for surgical planning, understand surgical risk factors, and coordinate with anesthesia team for safe perioperative patient management.

WEEK 2 – THEME 3 & 4

Perioperative Complication & Postoperative Care

Day	Clinical Case	Core Teaching Points	Harden Integration Level	Multidisciplinary (Level 11)	Skills	Attitude
Day 1	Patient develops hypotension after spinal Anesthesia	Physiology of spinal anesthesia, causes & management of hypotension	Level 4-7 Clinical integration	Anaesthesia, Physiology	Monitoring vitals, fluids management	Vigilance
Day 2	Patient develops perioperative hypoxia & severe surgical pain in PACU	Oxygenation physiology, causes of hypoxia, airway obstruction, Post operative pain management	Level 8–9: Diagnostic reasoning	Anaesthesia, Pulmonology	Pulse oximetry interpretation, Pain scoring (VAS),	Rapid Response
Day 3		Transdisciplinary Clinico Contact session perioperative complication case	Level 9–12:	Anesthesia + Surgery + Medicine	Case discussion & Team based management	Empathy Teamwork
Day 4		Assessment of Module-case discussion and short viva		Anesthesia		

Specialty	Skill-Based Clerkship Learning Outcomes (LOs)
Anesthesia (Primary Discipline)	Identify causes of hypotension following spinal anaesthesia, recognize perioperative hypoxia, interpret pulse oximetry and capnography, demonstrate management steps for hypotension and oxygen desaturation, assess postoperative pain using pain scoring systems (VAS/NRS), and describe principles of multimodal analgesia and safe postoperative monitoring in PACU.
Pharmacology	Describe pharmacological management of hypotension (vasopressors, fluids), mechanism of action of analgesic drugs (opioids, NSAIDs, local anaesthetics), and principles of multimodal analgesia in perioperative pain management.
Physiology	Explain physiological basis of spinal anaesthesia–induced hypotension, mechanisms of oxygen transport and hypoxia, effects of sympathetic blockade on cardiovascular physiology, and physiology of pain pathways and nociception.
Medicine	Recognize systemic causes of hypotension and hypoxia, evaluate cardiorespiratory status, interpret vital signs and ABG findings, and identify risk factors for perioperative complications in patients with comorbidities such as diabetes, hypertension and cardiopulmonary disease.
Surgery	Recognize surgical factors contributing to perioperative complications, coordinate with anaesthesia team for management of hypotension and hypoxia, and understand the importance of effective postoperative pain control for surgical recovery.

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

Small Group discussion (Procedural Skills)
Direct Observations of Procedural Skills (DOPS)

#	Skill	Miller's Level	Expected Competence for 4th Year MBBS	Video Link
1	Pre-operative Airway Assessment	**Knows How**	Describe steps of airway assessment including mouth opening, thyromental distance, neck mobility and identification of difficult airway predictor	https://youtu.be/fSrc0466eIg?si=aInNJxlBB2tpcJtE
2	Bag Valve Mask (BVM) Ventilation	**Shows How**	Demonstrate proper mask seal and effective ventilation technique on mannequin under supervision.	https://youtu.be/zAV6Nl2sKws?si=ByR7UXsmReek7sZ4
3	Oxygen\Therapy (Nasal Cannula\Face Mask)	**Shows How**	Demonstrate different oxygen delivery devices &explain indication for their use	https://youtu.be/X7rCgnfzg_o?si=shKMGHrNtym5xxL8
4	Oropharagheal Airway (OPA) Insertion	**Shows How**	Demonstrate correct sizing & insertion of OPA in stimulation & recognize contraindication	https://youtu.be/Hzc_T4QBp4E?si=_QfjHbHAyiw97Aox
5	Endotracheal Intubation (Observation)	**Knows How**	Identify equipment used for intubation & explain steps of laryngoscopy and tracheal intubation	https://youtu.be/zMMjI86QJNA?si=jdvpy-YTdu5C2Qn5
6	Laryngeal Mask Airway (LMA)Insertion	**Knows How**	Describe indication, insertion, steps & complications of LMA use	https://youtu.be/lDd_-9YSzvQ?si=lUADM7GCNIlxTNLA
7	Monitoring During Anesthesia (ECG, NIBP, SPO2)	**Knows How**	Recognize monitoring devices & interpret basic parameters during anesthesia	https://youtu.be/sWER-wrG5rQ?si=XPz30FwTORawzeCT
8	Intravenous Cannulation	**Shows How**	Demonstrate IV canulation techniques using aseptic precautions under supervision	https://youtu.be/vE99rZ7JT3Q?si=KwhK2UG0L8hmmC8y

Theme: Perioperative Patient Safety & Airway Management
Week 1 & 2 Integrated Case-Anesthesia

Clinical Case Scenario

"Managing a High-Risk Surgical Patient with airway & Perioperative Complications"

A 58-year-old male (BMI 34) presents for elective laparoscopic cholecystectomy. He has a history of hypertension, type 2 diabetes & obstructive sleep apnea. He reports snoring, daytime sleepiness & occasional breathlessness on exertion

During pre-anesthesia evaluation, airway examination reveals

- Mallampati class3
- Short neck with limited extension
- Thyromental distance < 6 cm

Vital Signs:

- BP: 160/95 mmHg
- Pulse: 92|min
- SpO2= 96% @ RA

During induction of Anesthesia, the patient develops difficulty in mask ventilation & oxygen desaturation (SpO2=85%) After intubation, he develops sudden hypotension &Tachycardia

Investigations show:

- ECG: Sinus Tachycardia
- ABGs: Mild respiratory acidosis
- Chest X ray: mild cardiomegaly
- Blood Glucose: 210 mg|dl

The anesthesia team must stabilize airway, manage hemodynamic instability ensure safe peri operative car

Student Task (Problem-Based Trigger)

Students are asked to:

1. Identify perioperative risk factors in this patient.
2. Explain physiology of oxygenation & airway obstruction during anesthesia.
3. Interpret monitoring parameters (SpO2, ECG, ETCO2, BP)
4. Develop anesthesia plan for difficult airway management

5. Formulate a management strategy for intraoperative hypotension
6. Outline post-operative monitoring and pain management plan

---

What Makes This RMU Level-12?

- No subject-based headings.
- Concepts integrated within clinical decision making
- Patient problem drives learning across disciplines

Student apply knowledge, skills & attitudes simultaneously

Students Integrate:

- Airway anatomy & physiology
- Cardiovascular & Respiratory physiology
- Pharmacology of Anesthetic drugs
- Perioperative risk assessment
- Crisis control management
- Post operative pain control
- Patient safety & teamwork

- **SUBJECT CONTRIBUTION IN CLINICO–CONCEPT CONNECT SESSION – ANAESTHESIA**

Subject / Discipline	Nature of Contribution	Approximate Integration Weight (%)
Anesthesia (Primary Discipline	Pre-anesthesia evaluation, airway assessment, induction, monitoring, crisis management	40%
Physiology	Oxygen transport, Ventilation physiology, cardiovascular response to anesthesia	15%
Pharmacology	Mechanism of induction agents, muscle relaxants opioids& vasopressors	15%
Medicine	Management of hypertension, diabetes & perioperative risk	
Surgery	Surgical requirements affecting anesthesia plan	10%
Emergency medicine	Airway emergencies & resuscitation	10%

LIST OF LGIS TOPICS ANESTHESIA 4TH YEAR MBBS

Topic	Learning Objective	Level of Competency
PRE-ANESTHESIA ASSESSMENT	Define pre-anaesthesia evaluation and its importance. Identify components of pre-operative history and examination. Explain ASA physical status classification. Assess per-operative risk factors (cardiac, respiratory, metabolic). Interpret basic investigations required before anesthesia. Formulate a safe anesthetic plan based on patient condition.	**C1 C2 C3**
AIRWAY ASSESMENT AND MANAGEMENT	Describe anatomy of airway relevant to anesthesia. Explain predictors of difficult airway (Mallampati classification, thyromental distance). Demonstrate steps of bag-mask ventilation and endotracheal intubation. Recognize causes of difficult ventilation and intubation. Discuss difficult airway algorithm and emergency airway management	**C1 C2 C3**
GENERAL ANESTHESIA AND MONITERING	Define general anesthesia and its components. Explain stages of anesthesia. Identify commonly used induction agents and inhalational anesthetics. Interpret standard monitoring (ECG, SpO2, NIBP, ETCO2). Describe complications associated with general anesthesia	**C1 C2 C3**
REGIONAL ANESTHESIA	Describe principles of regional anesthesia. Explain anatomy of spinal cord and epidural	**C1 C2 C3**

(SPINAL & EPIDURAL)	space. Identify indications and contraindications of spinal anesthesia. Recognize complications such as hypotension and post-dural puncture headache. Outline management of spinal anesthesia complications	
PERIOPERATIVE COMPLICATIONS	Identify common intra-operative complications (hypotension, hypoxia, arrhythmias). Explain causes of perioperative anaphylaxis and aspiration. Interpret monitoring findings in perioperative emergencies. Describe immediate management of anesthesia related crisis. Emphasize patient safety and crisis resource management.	**C1 C2 C3**
POST-OPERATIVE CARE AND PAIN MANAGEMENT	Define post-operative care and recovery room monitoring. Identify early post-operative complications. Explain pain pathways and pain assessment scales. Describe multimodal analgesia and opioid use. Discuss prevention and management of post-operative nausea and vomiting.	**C1 C2 C3**

SECTION- IV

Learning Management System

THEME -BASED LMS Assessment Document

4th yr MBBS 2026

Vision

To enhance competency-based learning and clinical reasoning skills among Fourth-year medical students by leveraging a robust Learning Management System (LMS) to implement weekly, clinically-oriented assessments in Medicine and Allied specialties.

Mission

To standardize online learning and assessment through a structured LMS platform that supports interactive teaching, continuous evaluation, quality assurance, and improved learning outcomes in medical education**.**

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.

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.

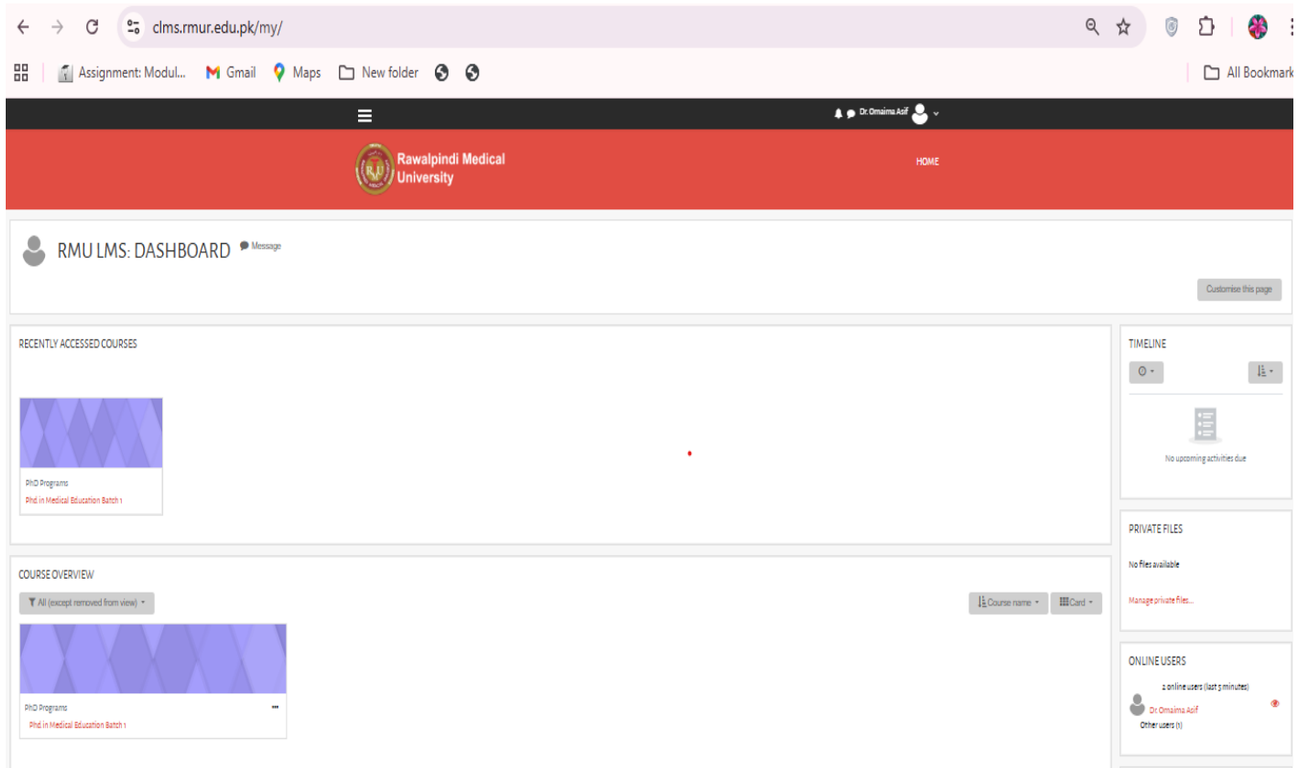
- **Integration of Technology in Medical Education:**

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.

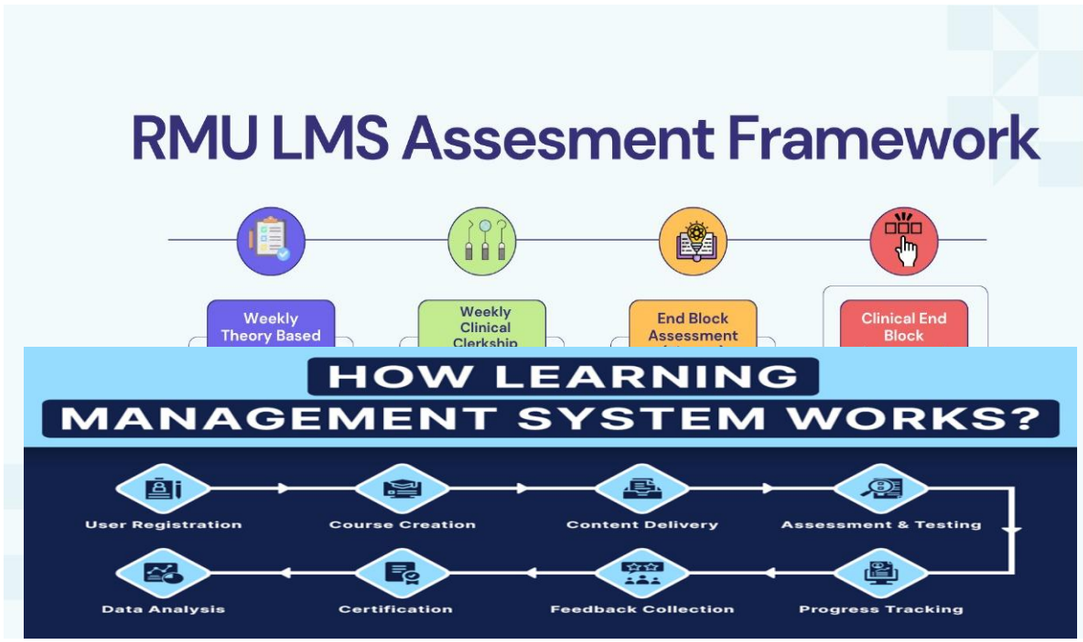
RMU LMS Website

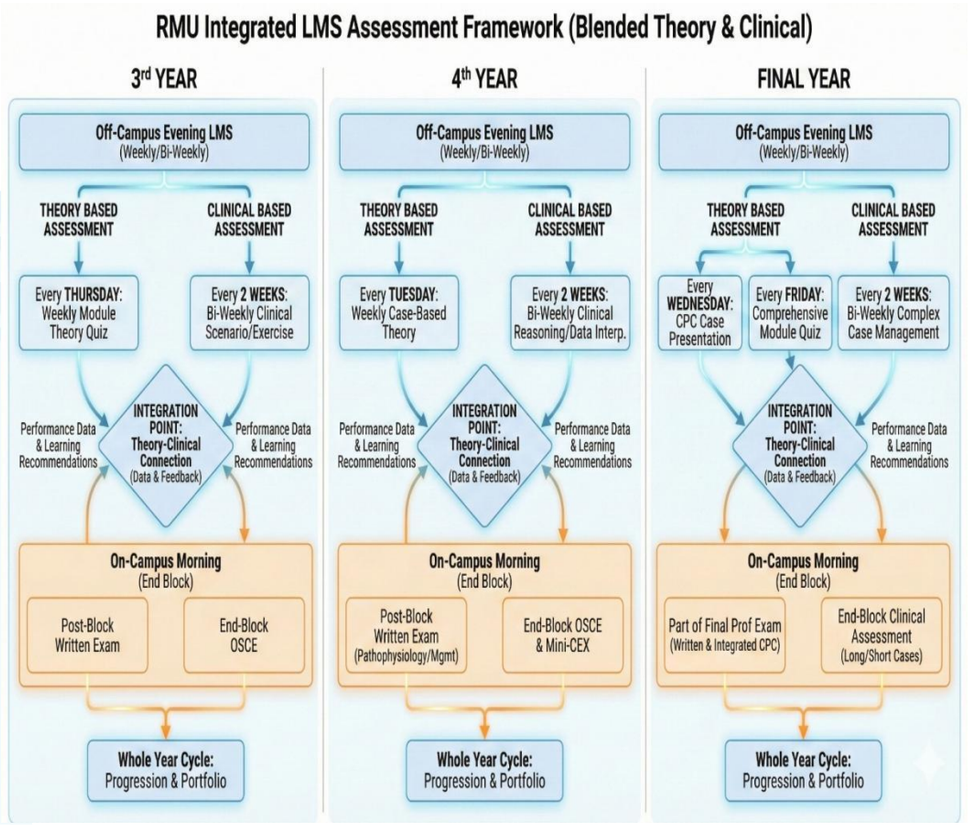
Weblink: https://clms.rmur.edu.pk/



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.

Curriculum of Anaesthesia Block

WEEK	TOPICS OF LGIS & SGD	TOPICS OF SDL	LEARNING OBJECTIVES OF SDL	LEARNING RESOURCES	MODE OF ASSESSMENT
Week 1 (Pre-Anesthesia Assessment & Airway Management)	Pre-anesthesia assessment: history, examination, investigations ASA physical status classification Pre-operative fasting guidelines Airway anatomy and airway assessment (Mallampati) Difficult airway identification Induction of anesthesia and airway protection Muscle relaxants in airway management	Anatomy of upper airway Radiology relevant to airway Airway devices (ET tube, LMA, laryngoscope)	Describe components of pre-anesthesia assessment Apply ASA classification Explain fasting guidelines Identify predictors of difficult airway Outline safe airway management	Miller's Anesthesia Morgan & Mikhail Clinical Anesthesiology	LMS Based MCQs
Week 2 (Perioperative Hypoxia & Post-operative Pain)	Causes of perioperative hypoxia Monitoring of oxygenation (pulse oximetry, capnography) Immediate management of hypoxia in OR Physiology of postoperative pain Pain assessment scales (VAS, NRS) Pharmacological management of postoperative pain Multimodal analgesia	Imaging related to respiratory complications Pharmacology of common analgesics	Explain causes of perioperative hypoxia Interpret basic monitoring Identify early signs of hypoxia Describe mechanisms of postoperative pain Formulate a pain management plan	Miller's Anesthesia Morgan & Mikhail Clinical Anesthesiology	LMS Based MCQs

Topic	Learning Goals	Video Link
Upper Airway Anatomy for Intubation	1.Describe anatomical structures of the upper airway relevant to anaesthesia. 2. Identify airway landmarks used during laryngoscopy. 3. Explain how airway anatomy affects ventilation and intubation.	) https://www.youtube.com/watch?v=nlY0VXNVDtk
Airway Assessment (Mallampati & LEMON)	1.Describe components of airway assessment. 2. Explain Mallampati classification and LEMON method. 3. Identify predictors of difficult airway.	) https://www.youtube.com/watch?v=Dek6gi_uV8M
Airway Devices in Anaesthesia	1.Describe endotracheal tubes and supraglottic airway devices. 2. Explain indications of LMA and ET tube. 3. Demonstrate understanding of safe airway device use	) https://www.youtube.com/watch?v=gngdLS33ASc
Chest X-ray in Respiratory Complication	1.Interpret common chest X-ray findings. 2.Identify atelectasis and pneumothorax on imaging. 3.Relate radiological findings with postoperative respiratory complications.	) https://www.youtube.com/watch?v=QfiI3j5dlPo
Pharmacology of Post-operative Analgesics	1.Describe mechanism of opioids and NSAIDs. 2. Compare different analgesics used postoperatively. 3. Explain multimodal analgesia.	https://www.youtube.com/watch?v=E9TaTVy2hBw
Pain Assessment Scales	1.Describe VAS and Numeric Rating Scale. 2.Apply pain assessment tools in postoperative patients. 3.Interpret pain scores for analgesic management.	https://www.youtube.com/watch?v=4uNnLd_oWf8

Implementation of LMS

Table of Specification of weekly LMS of 4th Year MBBS

OFFICE OF THE VICE CHANCELLOR
RAWALPINDI MEDICAL UNIVERSITY
RAWALPINDI.
Ph.051-9290360, 051-9290358
Fax No.051-9290519, 051-9280462
No./ 37 /RMU, Dated: 14/02/2026

Notice

Guidelines for Off-Campus LMS-Based Assessments

In continuation of efforts to maintain transparency, standardization, and academic rigor in assessments conducted through the Learning Management System (LMS), the following guidelines are hereby issued for off-campus LMS-based assessments for undergraduate MBBS programs.

1. **Number of MCQs**
   - For Basic Sciences subjects, the assessment paper shall consist of 40 Multiple Choice Questions (MCQs).
   - For Clinical Sciences subjects, the assessment paper shall consist of 35 Multiple Choice Questions (MCQs).
2. **Standard of MCQs**
   - All MCQs should be designed in accordance with USMLE-style question construction.
   - Questions should primarily assess higher cognitive levels (C4–C6) as per Bloom's Taxonomy, focusing on:
     - Analysis
     - Evaluation
     - Clinical reasoning and application
3. **Time Allocation**
   - The time allocated for each MCQ shall be 45 seconds in the LMS assessment setting.
4. **Submission and Approval**
   - The MCQ paper prepared for LMS-based assessment shall be submitted to the Department of Medical Education (DME) for submission to the Vice Chancellor for final approval prior to uploading on the LMS.

All departments are directed to strictly adhere to the above guidelines to ensure uniformity and quality of assessment across all subjects.
This directive shall be implemented with immediate effect.

Prof. Dr. Muhammad Umar
Vice Chancellor
Rawalpindi Medical University
Rawalpindi

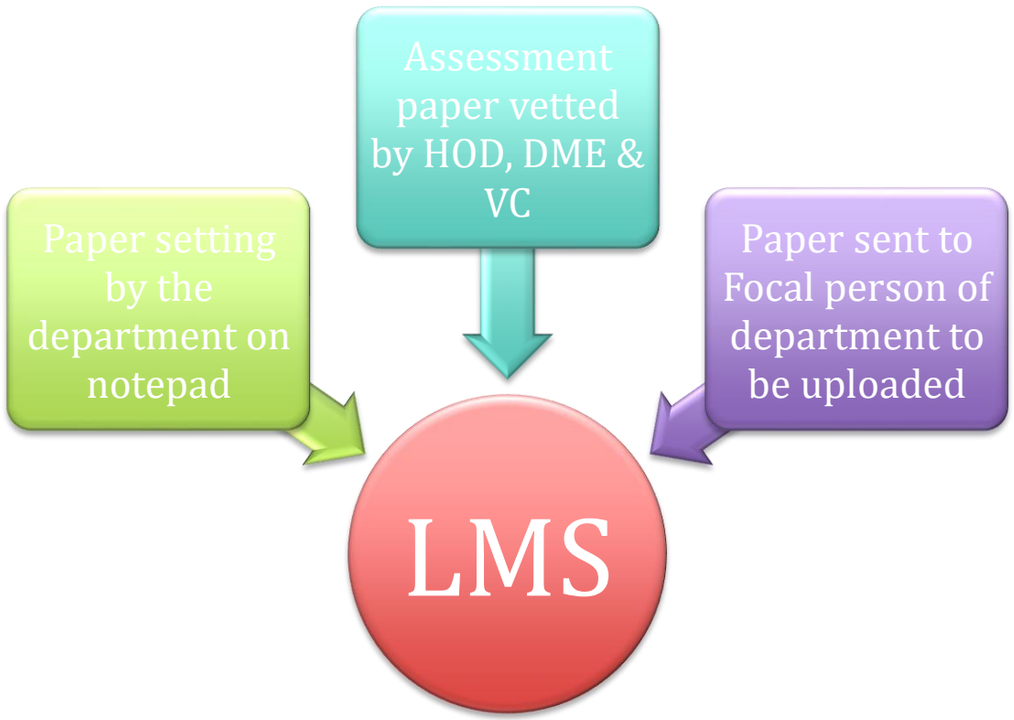
No. & Date Even

Copy To:

1. Director DME, RMU
2. All Concerned Professors / Heads of Basic Sciences Departments, RMU
3. All Concerned Officials
4. Master File
5. Notice Board

Assessment Papers

Hierarchy of conducting LMS

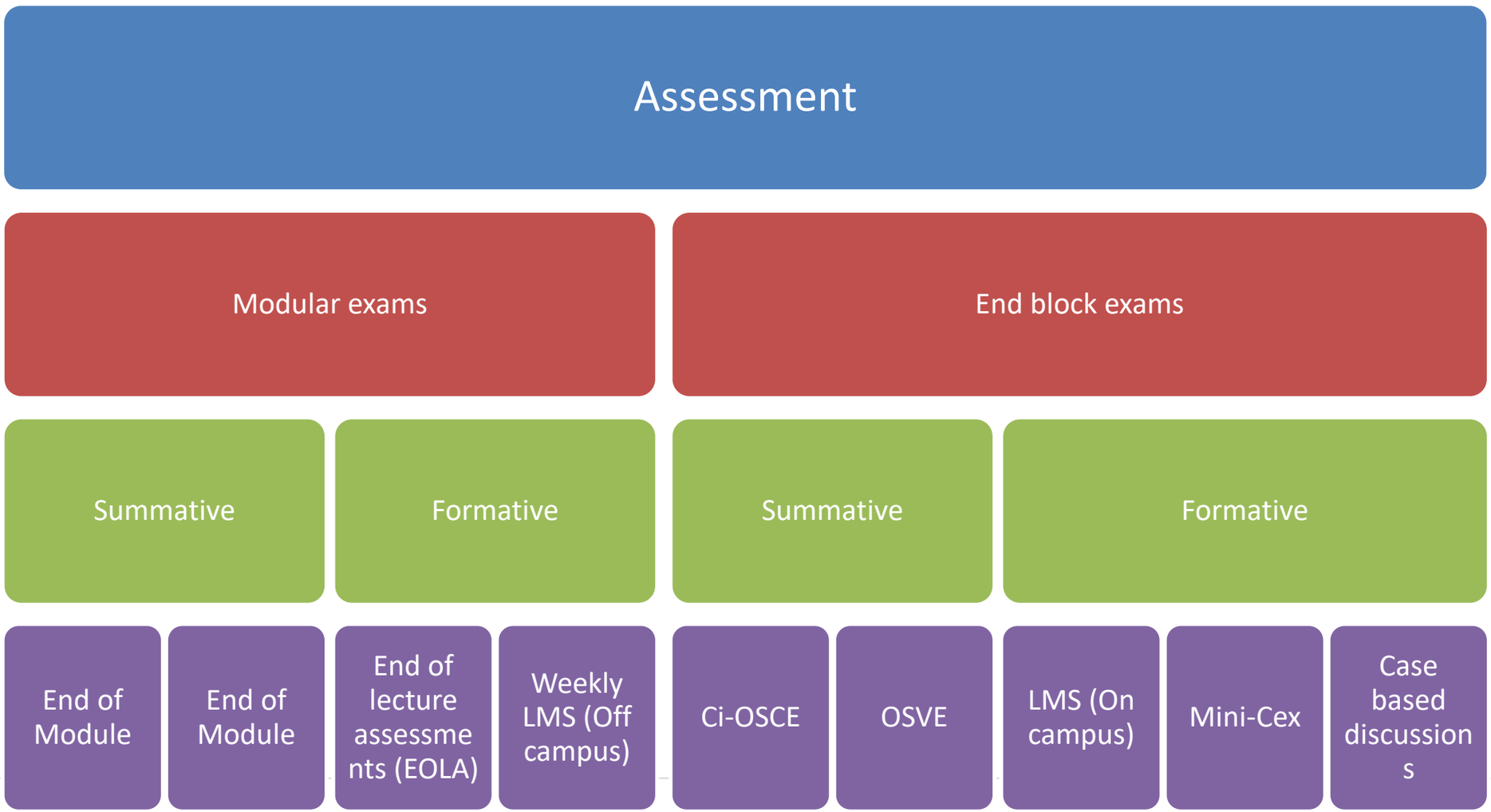


Assessment Format: Most assessments are out of 90 marks, with an adjacent column calculating the percentage (`=Score/90`).

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

SECTION- V

Assessment Strategies


Assessment
Modular exams
End block exams
Summative
Formative
Summative
Formative
End of Module
End of Module
End of lecture assessments (EOLA)
Weekly LMS (Off campus)
Ci-OSCE
OSVE
LMS (On campus)
Mini-Cex
Case based discussions

FOURTH YEAR MBBS
Clinical Clerkship Programme

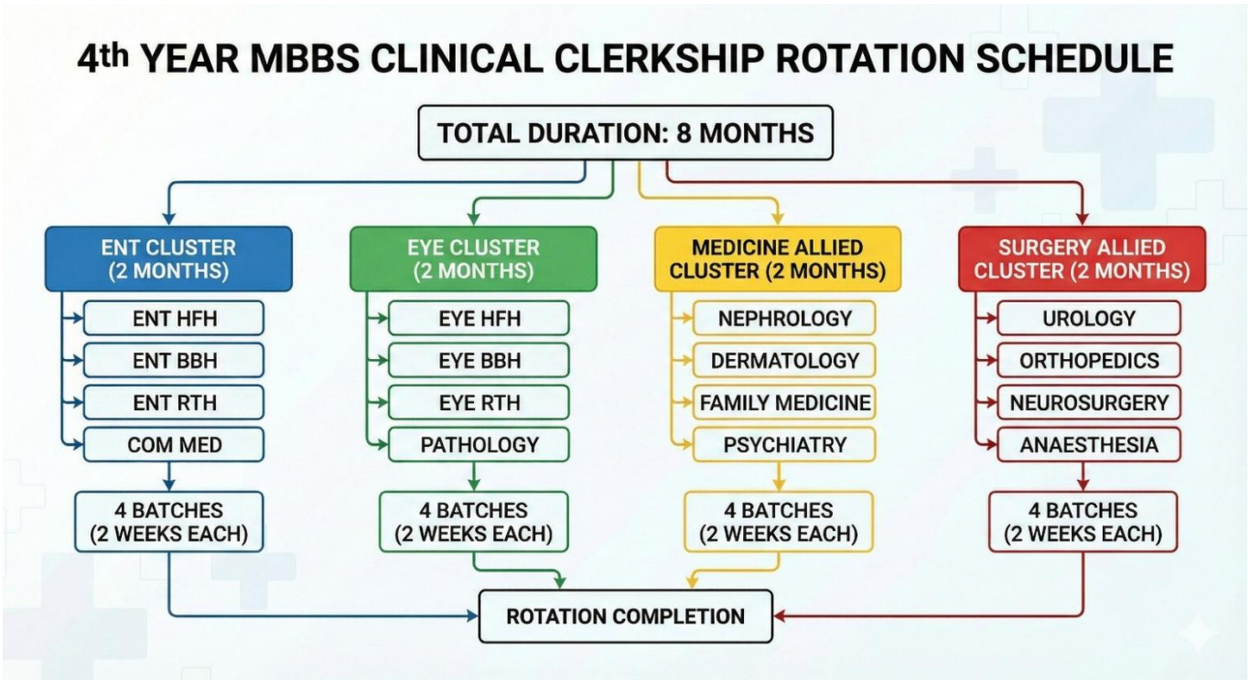
Cluster-Based Rotation Framework with Assessment Guidelines

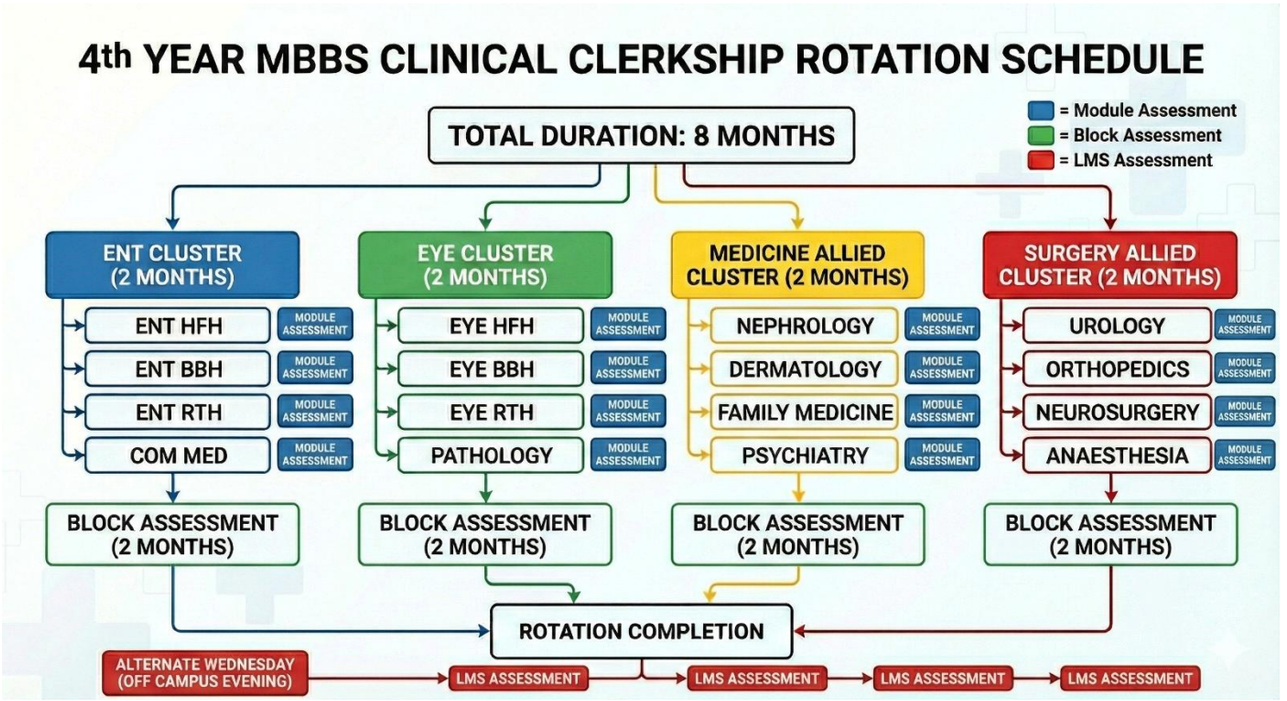
Four Clinical Clusters | Four Batch Rotations | 2-Week Modules

End Module Assessments + End Block Assessments

Department of Medical Education

Faculty of Medicine


4th YEAR MBBS CLINICAL CLERKSHIP ROTATION SCHEDULE
TOTAL DURATION: 8 MONTHS
ENT CLUSTER (2 MONTHS)
ENT HFH
ENT BBH
ENT RTH
COM MED
4 BATCHES (2 WEEKS EACH)
EYE CLUSTER (2 MONTHS)
EYE HFH
EYE BBH
EYE RTH
PATHOLOGY
4 BATCHES (2 WEEKS EACH)
MEDICINE ALLIED CLUSTER (2 MONTHS)
NEPHROLOGY
DERMATOLOGY
FAMILY MEDICINE
PSYCHIATRY
4 BATCHES (2 WEEKS EACH)
SURGERY ALLIED CLUSTER (2 MONTHS)
UROLOGY
ORTHOPEDICS
NEUROSURGERY
ANAESTHESIA
4 BATCHES (2 WEEKS EACH)
ROTATION COMPLETION


4th YEAR MBBS CLINICAL CLERKSHIP ROTATION SCHEDULE
TOTAL DURATION: 8 MONTHS
= Module Assessment
= Block Assessment
= LMS Assessment
ENT CLUSTER (2 MONTHS)
EYE CLUSTER (2 MONTHS)
MEDICINE ALLIED CLUSTER (2 MONTHS)
SURGERY ALLIED CLUSTER (2 MONTHS)
ENT HFH
ENT BBH
ENT RTH
COM MED
EYE HFH
EYE BBH
EYE RTH
PATHOLOGY
NEPHROLOGY
DERMATOLOGY
FAMILY MEDICINE
PSYCHIATRY
UROLOGY
ORTHOPEDICS
NEUROSURGERY
ANAESTHESIA
MODULE ASSESSMENT
BLOCK ASSESSMENT (2 MONTHS)
ROTATION COMPLETION
ALTERNATE WEDNESDAY (OFF CAMPUS EVENING)
LMS ASSESSMENT
LMS ASSESSMENT
LMS ASSESSMENT
LMS ASSESSMENT

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 | Anesthesia | Neurosurgery | Anesthesia	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 hematological 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, hematological 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-centered 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, Anesthesia, Neurosurgery, and Anesthesia. 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)	Anesthesia & Perioperative Medicine	Teaching Hospital / Anesthesia Department & OT
Wk 5–6	Module 3 (Weeks 5–6)	Neurosurgery	Teaching Hospital / Neurosurgery Unit
Wk 7–8	Module 4 (Weeks 7–8)	Anesthesia	Teaching Hospital / Anesthesia Ward & OT

6.2 Clinical Competencies — Surgery Allied Cluster

Orthopedics: Musculoskeletal examination, fracture management, splinting, and interpretation of orthopedic imaging. Anesthesia: 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. Anesthesia: Urological history and examination, catheterization, 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. Standardized 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.

Table of Specification (TOS) of all Examining Subjects

Preamble:

The Table of Specifications (TOS) is a detailed framework that describes how assessment items are distributed in terms of content in examination. The purpose of the TOS is to ensure that educational objectives, instructional content, and evaluation criteria are all in line with one other. This allows us to guarantee the validity, integrity, and reliability of assessments while supporting our students' overall growth. This paper describes structured mode of assessment by outlining the cognitive levels, domains, and weightings of assessment items.

Statutes:

1. **Schedule:** The Fourth Professional MBBS shall be held at the end of fourth year.
2. **Subjects:** Every candidate shall be required to study the following subjects in each block

a. **Core subjects-** ENT, Eye, Pathology, Pharmacology & Community Medicine
b. **Clinical Examining Subjects:** Surgery & Allied (Neurosurgery, Orthopedics, Anesthesia) Medicine & Allied (Nephrology, Dermatology, Psychiatry, Family Medicine)
c. **Vertically integrated Subjects-** Medicine, Surgery, Gynae & OBS, Pediatrics
d. **Horizontally Integrated Subjects-**Inter departmental integration with 4th year subjects
e. **Spirally Integrated subjects-** Research, family medicine
f. **General Cluster ALPHA** (Artificial Intelligence, Leadership, Professionalism, Humanities and Arts).

3. **Assessments:** There will be six papers in fourth professional examination

Fourth Professional Examination- 1600 Marks

i. Block 1 Assessment (ENT & Community Medicine)-: 300 Marks (Professional Exam:180 Marks+ CIA: 120 Marks)
ii. Block 2 Assessment (EYE & Community Medicine) - 300 Marks (Professional Exam:180 Marks + CIA: 120 Marks)
iii. Block 3 Assessment (Pharmacology, Pathology &Community Medicine) -300 Marks (Professional Exam:180 Marks+ CIA:120 Marks)
iv. Block 4 Assessment (Pharmacology, Pathology &Community Medicine) -300 Marks (Professional Exam:180 Marks +CIA:120 Marks)
v. Block 5 Assessment (Medicine & Allied) -200 Marks (Professional Exam: 120 Marks+ CIA:80 Marks)
vi. Block 6 Assessment (Surgery & Allied) -200 Marks (Professional Exam: 120 Marks+ CIA:80 Marks)

4. **Continuous Internal Assessment (CIA):** Continuous Internal Assessment means the assessment based on continuous internal assessment (CIA) tests given to the students during an academic period. Each block assessment will have a CIA of 40%.
5. **Block Assessments**: Each Block assessment will comprise of two Domains, “Theory (Cognitive)” and “practical (Psychomotor)”.

5.1. Domains

a. Cognitive domain: Theory/Written assessment
b. Psychomotor domain: Practical/ Performance assessment

5.2. Instructional strategies for assessment: Separate Instructional strategies will be used for cognitive and psychomotor domain, which includes the following

5.2.1. Cognitive Domain (Theory/written)

5.2.1.1. MCQs:

It will be single best type of Multiple-Choice Questions (MCQs) with one stem & with five options. Integration ratio in multiple choice questions will be 70% core subject knowledge, 10% will be horizontally integrated subjects, 10% Vertical &10% spiral Integration. Each MCQ will carry One Mark and Time allowed per MCQ will be 1 minute.

5.2.1.2. Short Essay Type Questions (SEQs):

a. **SEQs:** Short essay questions serve as an effective tool for assessing students' comprehension, critical thinking, and formulate them in their own words. Each SEQ will carry 5 Marks and time allowed per SEQ will be 10 minutes.

5.2.2. Practical (Psychomotor) Component:

6. **Objective Structured Practical Examination (OSPE):**

It will consist of Objective Structured Practical Examination (OSPE), time required for each station will be 5 min.

6.1.2. **Laboratory OSPE (Lab OSPE):** This section will comprise of practical components of core subject areas.

6.1.3. **Integrated OSPE (i-OSPE):** This section will comprise of horizontal and vertical integration.

6.1.4. **Clinically integrated OSPE (Ci OSPE):** This section will comprise of stations, one from research and one from ALPHA

6.1.5. **Objective Structured Clinical Examination (OSCE):** This section will comprise of stations to evaluate the student's ability to apply theoretical knowledge in a practical, clinical setting.

6.1.6. **Objectively Structured Viva Examinations (OSVE):** where student will be examined by the internal & external examiner using a structured making rubric for marking questions.

7. **Examination Eligibility:**

Eligibility to appear in professional will be as per RMU Assessment Policy approved by the Academic Council and Syndicate.

8. **Passing Criteria:**

A student will be declared successful in a exam as per passing criteria defined in RMU Assessment Policy approved by the Academic Council and Syndicate.

9. **Supplementary Examination Criteria:**

Will be according to RMU Assessment Policy approved by the Academic Council and Syndicate.

TABLE 1: ORIGINAL DISTRIBUTION OF MARKS IN ALL BLOCKS (SUBJECT WISE)

Subjects	Marks in professional in respective Blocks	Theory marks in respective blocks	OSPE/OSVE marks in respective blocks	Internal Assessment		Total Marks
				Internal Assessment in respective blocks	LMS	
Community Medicine	180	90	90	90	30	300
Pathology	180	105	105	90	30	300
Pharmacology	120	60	60	60	20	200
ENT	120	60	60	60	20	200
EYE	120	60	60	60	20	200
Medicine & Alliied	120	60	60	60	20	200
Surgery & Allied	120	60	60	60	20	200
Grand Total						**1600**

TABLE 2: CIA CALCULATED FROM ON CAMPUS AND OFF CAMPUS ASSESSMENTS

Blocks	Subjects	Total marks	Block & Modules Assessment		LMS Assessment		Total marks
			Theory	Practical	Theory	Practical	
Block 1 120 Marks	ENT	80 marks	30 marks	30 marks	10	10	120 Marks Theory =60 Marks Practical=60 Marks
	Community Medicine	40 marks	15 marks	15 marks	5	5	
Block 2 120 Marks	EYE	80 marks	30 marks	30 marks	10	10	120 Marks Theory =60 Marks Practical=60 Marks
	Community Medicine	40 marks	15 marks	15 marks	5	5	
Block 3 120 Marks	Pathology	60 marks	25 marks	25 marks	5	5	120 Marks Theory =60 Marks Practical=60 Marks
	Pharmacology	40 marks	15 marks	15 marks	5	5	
	Community Medicine	20 marks	7.5 marks	7.5 marks	2.5	2.5	
Block 4 120 Marks	Pathology	60 marks	25 marks	25 marks	5	5	120 Marks Theory =60 Marks Practical=60 Mark
	Pharmacology	40 marks	15 marks	15 marks	5	5	
	Community Medicine	20 marks	7.5 marks	7.5 marks	2.5	2.5	
Block 5	Medicine & Allied	80 marks	30 marks	30 marks	10	10	120 Marks Theory =60 Marks Practical=60 Mark
Block 6	Surgery & Allied	80 marks	30 marks	30 marks	10	10	120 Marks Theory =60 Marks Practical=60 Mark

SECTION II

A: Subject wise distribution of Marks for 4th year MBBS (Batch 49)

C: Theme wise marks breakup of blocks 4TH Professional Examination 2025 (Batch 49)

Block 1

(Otorhinolaryngology I&II)

Themes	Discipline	Theory				Practical (OSPE)			OSVE	Marks	%	Total Marks per subject	
		No of MCQs (1 marks each)	No of SEQs (5 marks each)	Marks	%	No of Stations of OSCE (5 marks each)	No of Stations iOSPE (5 marks each)	No of Stations ciOSPE (5 marks each)	OSVE			Marks	%
Clinical & basic aspects of ear, nose &throat diseases	ENT	30	6	60	67	8	-	-	20	60	67	120	67
Disease Burden & Prevention	Community Medicine	15	3	30	33	-	1	1	8+7	30	33	60	33
Research, ALPHA and GEC							1						
Total		**45**	**9x5=45**	**90**		**8x5=40**	**2x5=10**	**1x5=05**	**35**	**90**		**180**	**100%**
Grand Total		**90**				**90**					**180**		

B. Block-wise distribution of Marks of 4th Year MBBS

Subject	Theory			Practical			Total Marks
	Component	No of Items	Marks	Component	No of Items	Marks	
Block 1 (ENT & Community Medicine) Total marks with CIA =210+90= 300	Section I-MCQ Section II-SEQ	45 45	45 45	iOSPE ciOSPE GEC OSVE	5 5 1 2	25 25 05 35	180
	Continuous Internal Assessment (40%)		60	Continuous Internal Assessment (40%)		60	120
	Total Marks		**150**	**Total Marks**		**150**	**300**
Block 2 ENT & Community Medicine) Total marks with CIA =210+90= 300	Section I-MCQ Section II-SEQ	45 40	45 45	iOSPE ciOSPE Research OSVE	5 5 1 2	25 25 05 35	180
	Continuous Internal Assessment (40%)		60	Continuous Internal Assessment (40%)		60	90
	Total Marks		**150**	**Total Marks**		**150**	**300**
Block 3 (Endocrinology & Reproduction) Total marks with CIA =210+90= 300	Section I-MCQ Section II-SEQ	55 35	55 35	LabOSPE iOSPE ciOSPE Research OSVE	3 3 3 1 3	15 15 15 05 40	180
	Continuous Internal Assessment (40%)		60	Continuous Internal Assessment (40%)		60	120
	Total Marks		**150**	**Total Marks**		**150**	300
Subject	**Theory**			**Practical**			**Total Marks**
	Component	**No of Items**	**Marks**	**Component**	**No of Items**	**Marks**	
Block 4 (CNS & Psychiatry) Total marks with CIA =210+90= 300	Section I-MCQ Section II-SEQ	55 35	55 35	Lab OSPE iOSPE ciOSPE Research OSVE	3 3 3 1 3	15 15 15 05 40	180
	Continuous Internal Assessment (40%)		60	Continuous Internal Assessment (30%)		60	120

	Total Marks		**150**	**Total Marks**		**150**	**300**
Block 5 **Medicine & Allied** **Total marks with CIA =120+80= 200**	**Component**	**No. of Items**	**Marks**	**Practical**			**Total Marks**
				Component	**No of Items**	**Marks**	
Psychiatry	**MCQs**	15	15	**OSCE**	3	15	120
Nephrology		15	15		3	15	
Family Medicine		15	15		3	15	
Dermatology		15	15		3	15	
	Continuous Internal Assessment		40	Continuous Internal Assessment		40	80
	Total Marks		**100**	**Total Marks**		**100**	**200**
Block 6 **Surgery & Allied** **Total marks with CIA =120+80= 200**	**Component**	**No. of Items**	**Marks**	**Practical**			**Total Marks**
				Component	**No.of Items**	**Marks**	
Urology	**MCQs**	20	20	**OSCE**	4	20	120
Neurosurgery		20	20		4	20	
Orthopedics		20	20		4	20	
	Continuous Internal Assessment		40	Continuous Internal Assessment		40	80
	Total Marks		**100**	**Total Marks**		**100**	**200**

Block 2
(Otorhinolaryngology I&II)

Themes	Discipline	Theory				Practical (OSPE)			OSVE	Marks	%	Total Marks per subject	
		No of MCQs (1 marks each)	No of SEQs (5 marks each)	Marks	%	No of Stations of OSCE (5 marks each)	No of Stations iOSPE (5 marks each)	No of Stations ciOSPE (5 marks each)	OSVE			Marks	%
Clinical & basic aspects of ear, nose &throat diseases	ENT	30	6	60	67	8	-	-	20	60	67	120	67
Disease Burden & Prevention	Community Medicine	15	3	30	33	-	1	1	8+7	30	33	60	33
Research, ALPHA and GEC							1						
Total		**45**	**9x5=45**	**90**		**8x5=40**	**2x5=10**	**1x5=05**	**35**	**90**		**180**	**100%**
Grand Total		**90**				**90**					**180**		

Block 3 Endocrinology/ Reproduction modules

Theme	Subject	Theory			Practical			OSVE		Total Marks per subject	
		No of MCQs (1 marks each)	No of SEQs (5 marks each)	Marks	No of Stations of Lab OSPE (5 marks each)	No of Stations of iOSPE (5marks each)	No of Stations of ciOSPE (5 marks each)	OSVE	Marks	Total Marks	%
Endocrinal disorders & Pathophysiology of reproductive system	Pathology	30	4	50	6			20	50	100	57
Drugs used in Endocrinal disorders/hormonal preparations	Pharmacology	15	2	25	2			15	25	50	28
Disease Burden & Prevention of noncommunicable diseases & reproductive health problems	Community Medicine	10	1	15	-	1	1	5	15	30	15
Total		**55**	**7x5=35**	**90**	**8x5=40**	**1x5=5**	**1x5=5**	40	**90**	**180**	**100%**
Grand Total		**90**			**90**					**180**	

Block 4 Renal/ CNS modules

Theme	Subject	Theory			Practical			OSVE		Total Marks per subject	
		No of MCQs (1 marks each)	No of SEQs (5 marks each)	Marks	No of Stations of Lab OSPE (5 marks each)	No of Stations of iOSPE (5 marks each)	No of Stations of ciOSPE (5 marks each)	OSVE	Marks	Total Marks	%
Pathophysiology& disorders of renal & CNS system	Pathology	25	3	40	5			7+8	40	80	43
Pharmacotherapeutics related to renal & CNS Systems	Pharmacology	20	3	35	3			10+10	35	70	38
Disease Burden & Prevention of mental health problem	Community Medicine	10	1	15	-	1	1	3+2	15	30	19
Total		55	7x5=35	35	5x8=40	1x5=5	1x5=5	40	90	180	**100%**
Grand Total		**90**			**90**					**210**	

Block 5 Medicine & Allied

Block 5 Medicine & Allied	Component	No. of Items	Marks	Practical			Total Marks
				Component	No of Items	Marks	
Psychiatry	MCQs	15	15	OSCE	3	15	30
Nephrology		15	15		3	15	30
Family Medicine		15	15		3	15	30
Dermatology		15	15		3	15	30
Total		15x4=60			12x5=60		120
Grand Total		60			60		

Block 6 Surgery and Allied

Block 6 Surgery & Allied	Component	No. of Items	Marks	Practical			Total Marks
				Component	No.of Items	Marks	
Urology	MCQs	20	20	OSCE	4	20	40
Neurosurgery		20	20		4	20	40
Orthopedics		20	20		4	20	40
Total		20x3=60			12 x5= 60		120
Grand Total		60			60		

Blue Print of Pre- Annual (SEND-UP) Assessment for 4th Year MBBS 2025

Table of Specification

Block Examination Include

Written Theory Based Assessment

Audio Visual Aid assisted Assessment

Block I TOS (Otorhinolaryngology)

Block 1	Subject	MCQs*	Marks	EMQs*	Marks	SAQs*	Marks	SEQs*	Marks	Core Subject 70%			Horizontal & Vertical Integration			Spiral Integration 10%			Total Marks	Total Time	Av OSPE*		Time	Total Marks
										MCQs	EMQs	SAQ/SEQ	MCQs	EMQs	SAQs/SEQs	MCQs	EMQs	SAQs/SEQs			Stations	Marks		
Otorhinolaryngology	ENT	40	40	1	5	5	25	3	30	28	1	4	8	0	3	4	0	1	100	3 HRS	5	25	25 min	125
	Community Medicine	20	20	1	5	3	15	1	10	15	1	2	3	0	1	2	0	1	50		5	25	25 min	75
																								200

Block II TOS (Ophthalmology)

Block 2	Subject	MCQs*	Marks	EMQs*	Marks	SAQs*	Marks	SEQs*	Marks	Core Subject 70%			Horizontal & Vertical Integration			Spiral Integration 10%			Total Marks	Total Time	Av OSPE*		Time	Total Marks
										MCQs	EMQs	SAQ/SEQ	MCQs	EMQs	SAQs/SEQs	MCQs	EMQs	SAQs/SEQs			Stations	Marks		
Ophthalmology	EYE	40	40	1	5	5	25	3	30	28	1	4	8	0	3	4	0	1	100	3 HRS	5	25	25 min	125
	Community Medicine	20	20	1	5	3	15	1	10	15	1	2	3	0	1	2	0	1	50		5	25	25 min	75
																								200

Block III TOS (Endocrinology & Population Medicine & Reproduction)

Block 3	Subject	MCQs*	Marks	EMQs*	Marks	SAQs*	Marks	SEQs*	Marks	Core Subject 70%			Horizontal & Vertical Integration			Spiral Integration 10%			Total Marks	Total Time	Av OSPE*		Time	Total Marks
										MCQs	EMQs	SAQ/SEQ	MCQs	EMQs	SAQs/SEQs	MCQs	EMQs	SAQs/SEQs			Stations	Marks		
Endo & Reproduction	Pharmacology	25	25	1	5	2	10	1	10	20	1	1	3	0	1	2	0	1	50	3 HRS	3	15	15 min	65
	Pathology	25	25	1	5	2	10	1	10	20	1	1	3	0	1	2	0	1	50		4	20	20 min	70
	Community Medicine	25	25	1	5	2	10	1	10	20	1	1	3	0	1	2	0	1	50		3	15	15 min	65
																								200

Block IV TOS (Renal & CNS & Psychiatry)

Block 4	Subject	MCQs*	Marks	EMQs*	Marks	SAQs*	Marks	SEQs*	Marks	Core Subject 70%			Horizontal & Vertical Integration			Spiral Integration 10%			Total Marks	Total Time	Av OSPE*		Time	Total Marks
										MCQs	EMQs	SAQ/SEQ	MCQs	EMQs	SAQs/SEQs	MCQs	EMQs	SAQs/SEQs			Stations	Marks		
Renal & CNS & Psychiatry	Pharmacology	25	25	1	5	2	10	1	10	20	1	1	3	0	1	2	0	1	50	3 HRS	3	15	15 min	65
	Pathology	25	25	1	5	2	10	1	10	20	1	1	3	0	1	2	0	1	50		4	20	20 min	70
	Community Medicine	25	25	1	5	2	10	1	10	20	1	1	3	0	1	2	0	1	50		3	15	15 min	65
																								200

Block V & VI TOS (Medicine Allied & Surgery Allied)

Block 5 & 6	Subject	MCQs*	Marks	EMQs*	Marks	SAQs*	Marks	SEQs*	Marks	Core Subject 70%			Horizontal & Vertical Integration			Spiral Integration 10%			Total Marks	Total Time	Av OSPE*		Time	Total Marks
										MCQs	EMQs	SAQ/SEQ	MCQs	EMQs	SAQs/SEQs	MCQs	EMQs	SAQs/SEQs			Stations	Marks		
Block-5	*Medicine Allied	40	40	4	20	1	5	1	10	25	2	1	10	1	5	5	1	1	75	3 HRS	5	25	25 min	25
Block-6	**Surgery Allied	40	40	4	20	1	5	1	10	25	2	1	10	1	5	5	1	1	75		5	25	25 min	25
																								200

* Nephrology, Dermatology, Family Medicine & Psychiatry

** Orthopeadic, Urology, Neurosurgery

Surgery & Allied 4TH YEAR MBBS (Revised Notification Date 5th Nov, 2025)

Block-VI

CIA										
Roll No	Name of Student	LMS BASED ASSESSMENT				END BLOCK				
		LGIS		CLINICAL	TOTAL	THEORY		CLINICAL		TOTAL
		On Campus	Off Campus	10	20	30		30		60
		5	5							

Marks of Block										
Roll No	Name of Student	THEORY				Clinical				
		Orthopaedics	Neurosurgery	Urology	Total	Orthopaedics	Neurosurgery	Urology	Total	G-Total
		50	50	50	150	100	100	100	300	450

		CIA								
Roll No	Name of Student	THEORY				Clinical				
		Orthopaedics	Neurosurgery	Urology	Total	Orthopaedics	Neurosurgery	Urology	Total	G.Total
		10	10	10	30	10	10	10	30	60

CIA (LMS BASED ASSESSMENT DETAILED DIVISION OF MARKS)										
Roll No	Name of Student	LGIS				Clinical				
		Orthopaedics	Neurosurgery	Urology	Total	Orthopaedics	Neurosurgery	Urology	Total	G-Total
		3	4	3	10	3	4	3	10	20

SECTION – VI

Learning Resources

Learning Resources

Subject	Resources
Anaesthesia	• SMITH TEXTBOOK OF ANESTHESIA (19th Edition) • MORGAN & MIKHAHIL TEXTBOOK OF ANESTHESIA (28th Edition)