Otorhinolaryngology

2026

Fourth Year MBBS

RMU-12

Integrated Modular
MBBS Curriculum 2026
Isolation to Beyond Boundaries

Study Guide

ENT Module

Department of Medical Education

Rawalpindi Medical University

Department of Otorhinolaryngology

Integrated Modular Curriculum
4th year MBBS

	Rawalpindi Medical University			
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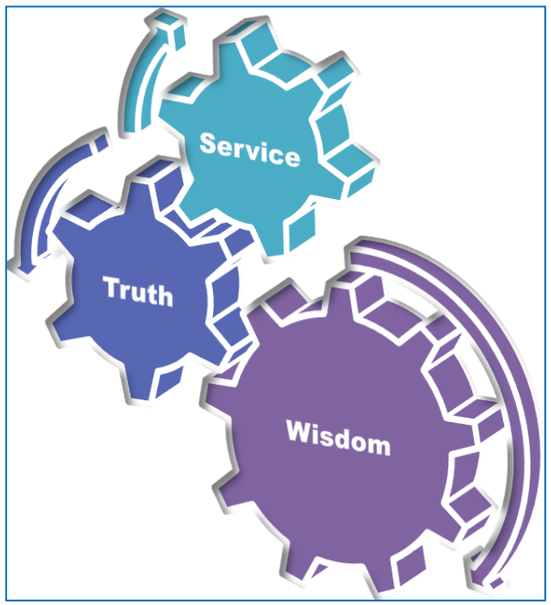
Motto



Curriculum Mission and Vision

Mission Statement

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

Vision and Values

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

Goals of the Undergraduate Integrated Modular Curriculum

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

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

Figure 1- RMU 12 Integrated Modular Curriculum 2026
Isolation to beyond boundaries
Competency Framework

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.

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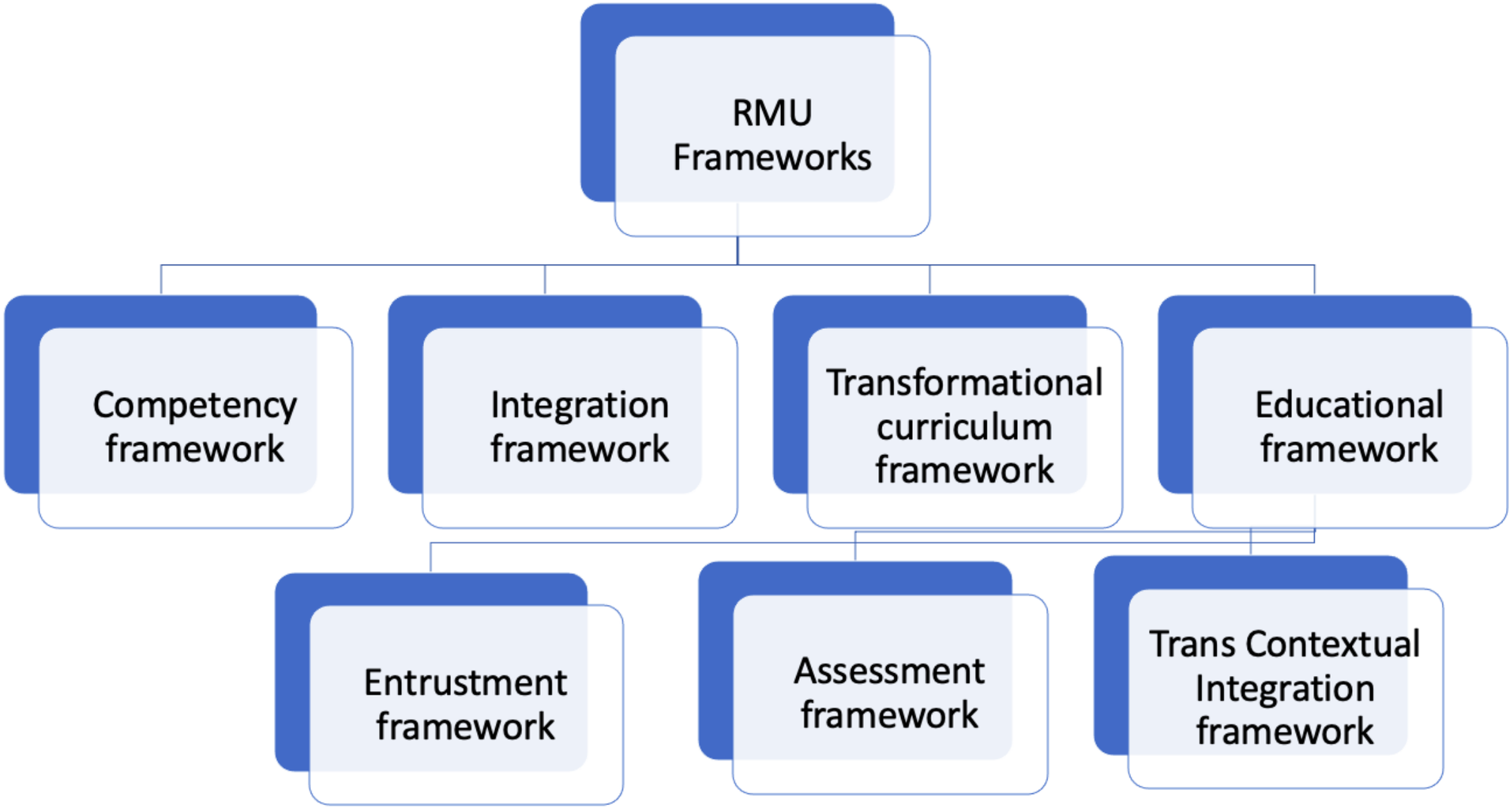
RMU Frameworks
Competency framework
Integration framework
Transformational curriculum framework
Educational framework
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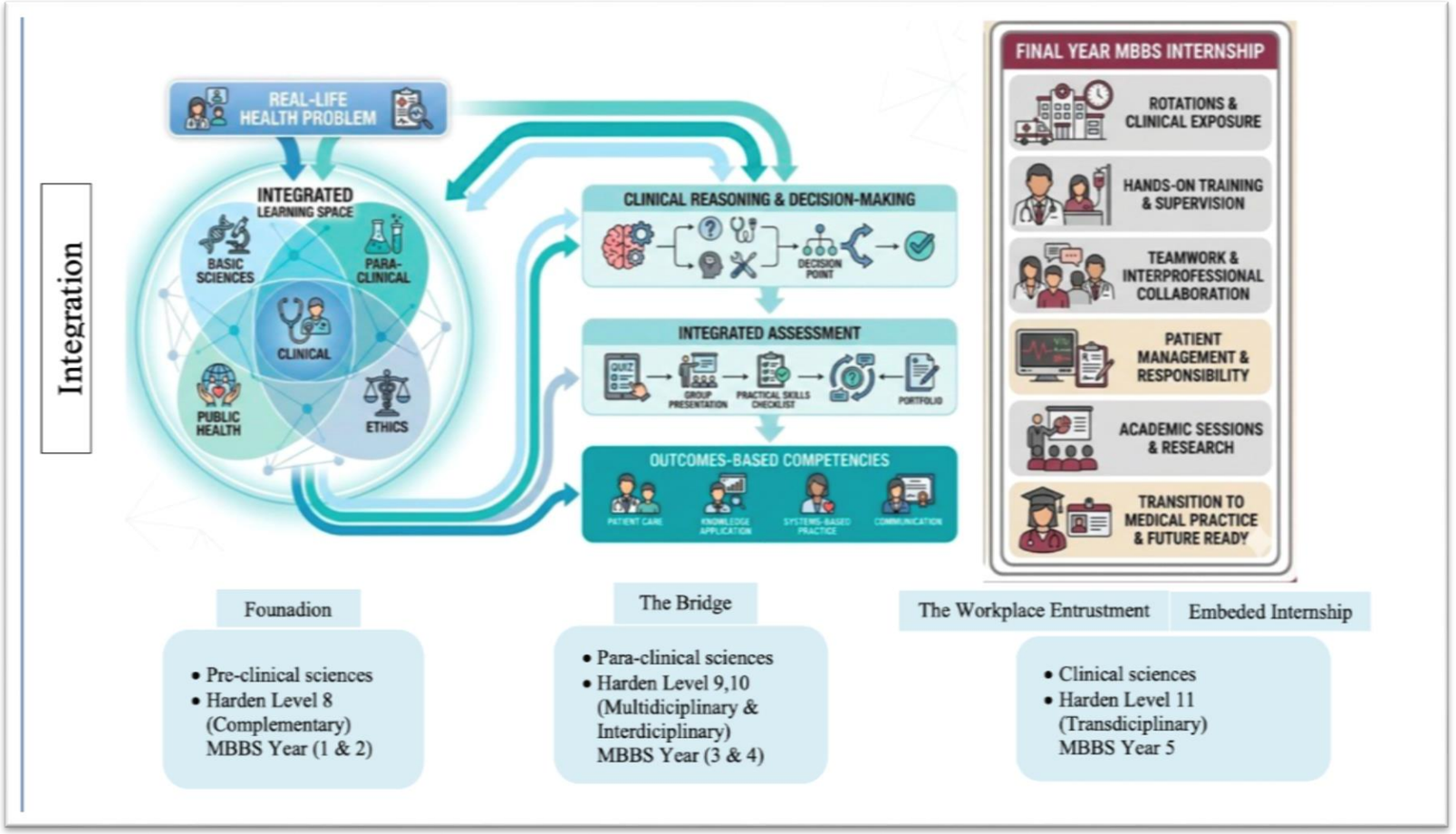

Figure 3 – Transformational Curriculum Framework of RMU 12 Integrated Modular Curriculum 2026
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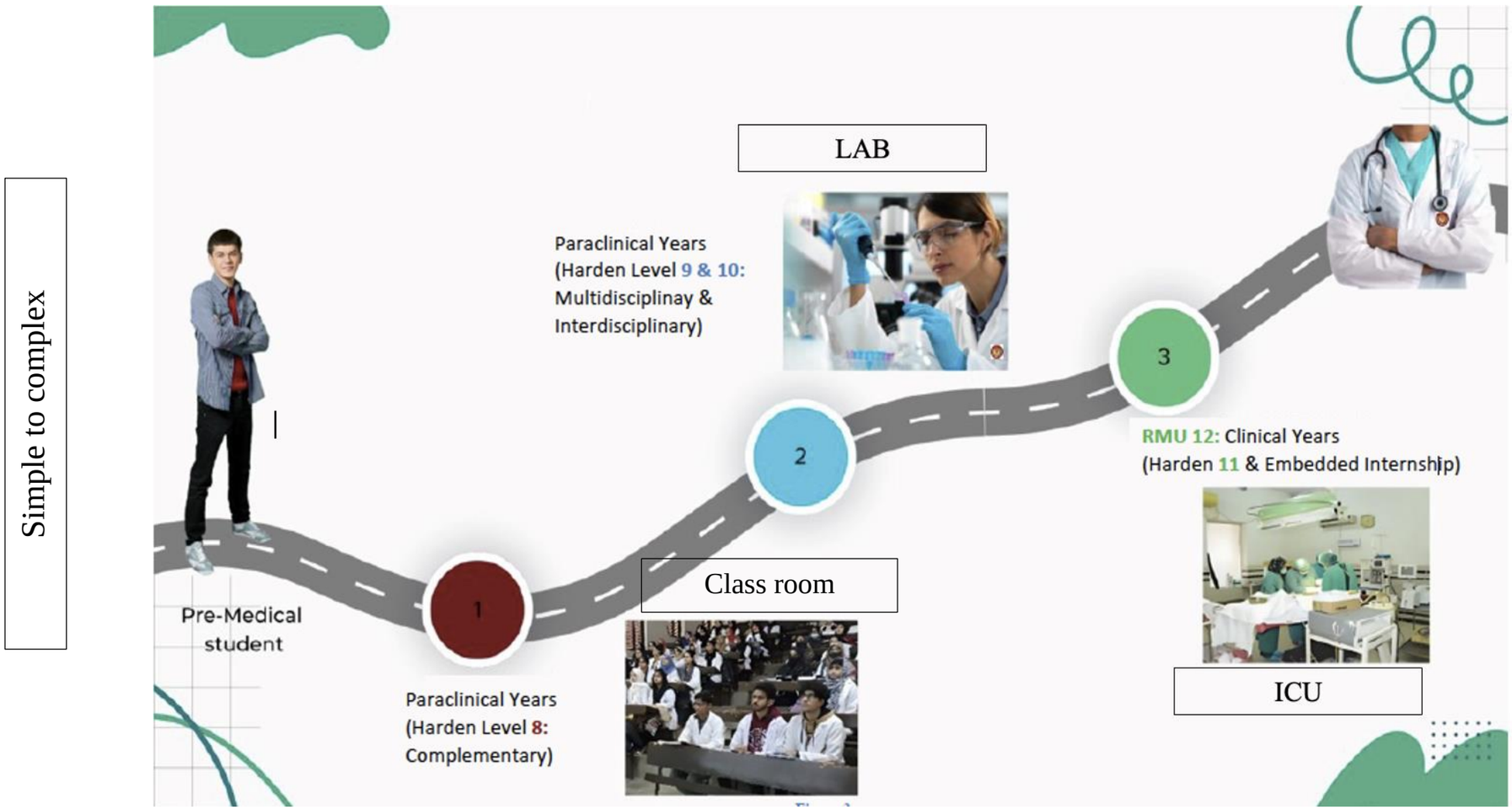

Figure 4 – Educational Framework of RMU 12 Integrated Modular Curriculum 2026
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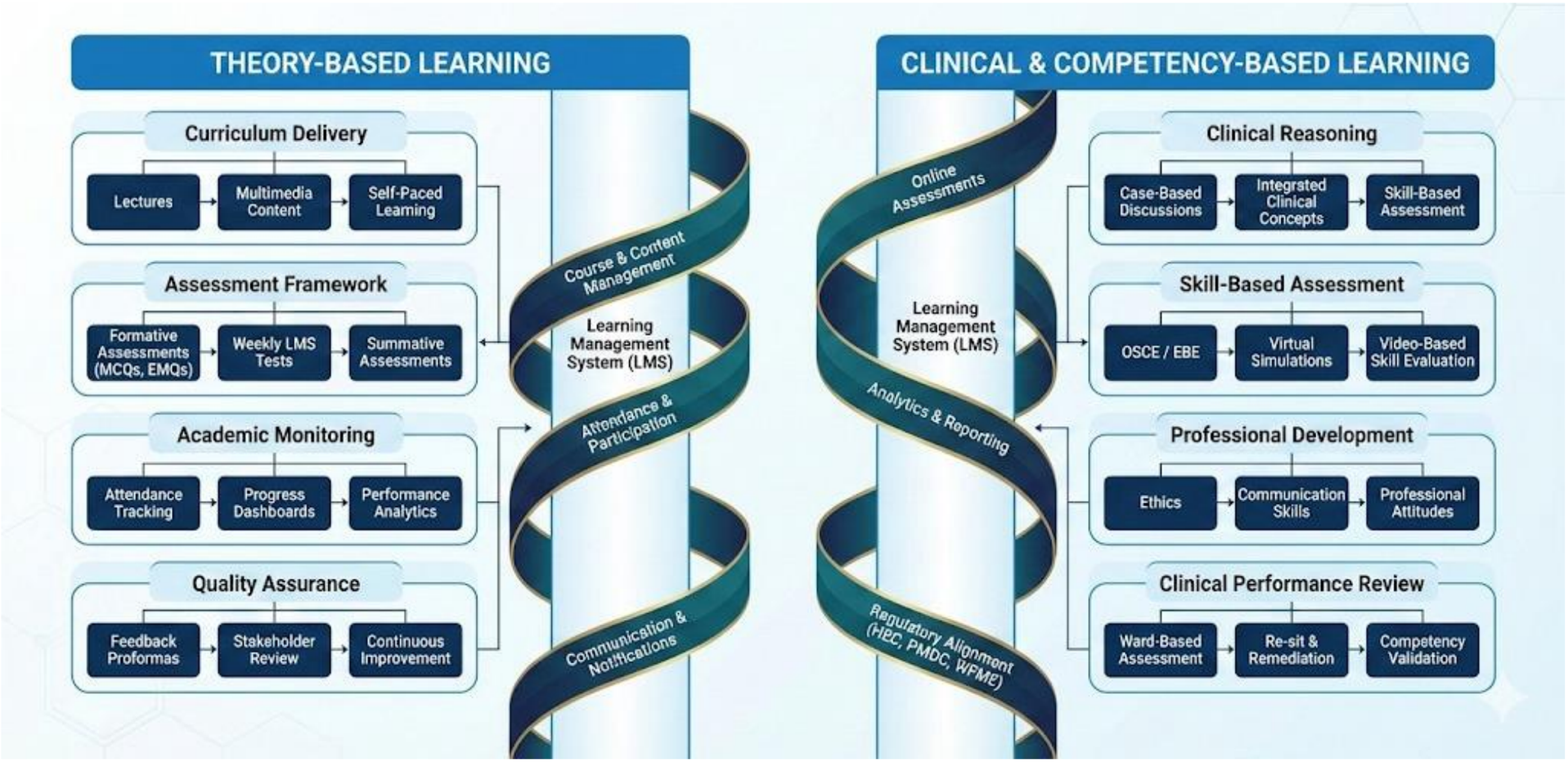

Figure 5 – Entrustment Framework of RMU 12 Integrated Modular Curriculum 2026
Isolation to beyond boundaries

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.

Figure 6 – Assessment framework of RMU 12 Integrated Modular Curriculum 2026
Isolation to beyond boundaries

Assessment

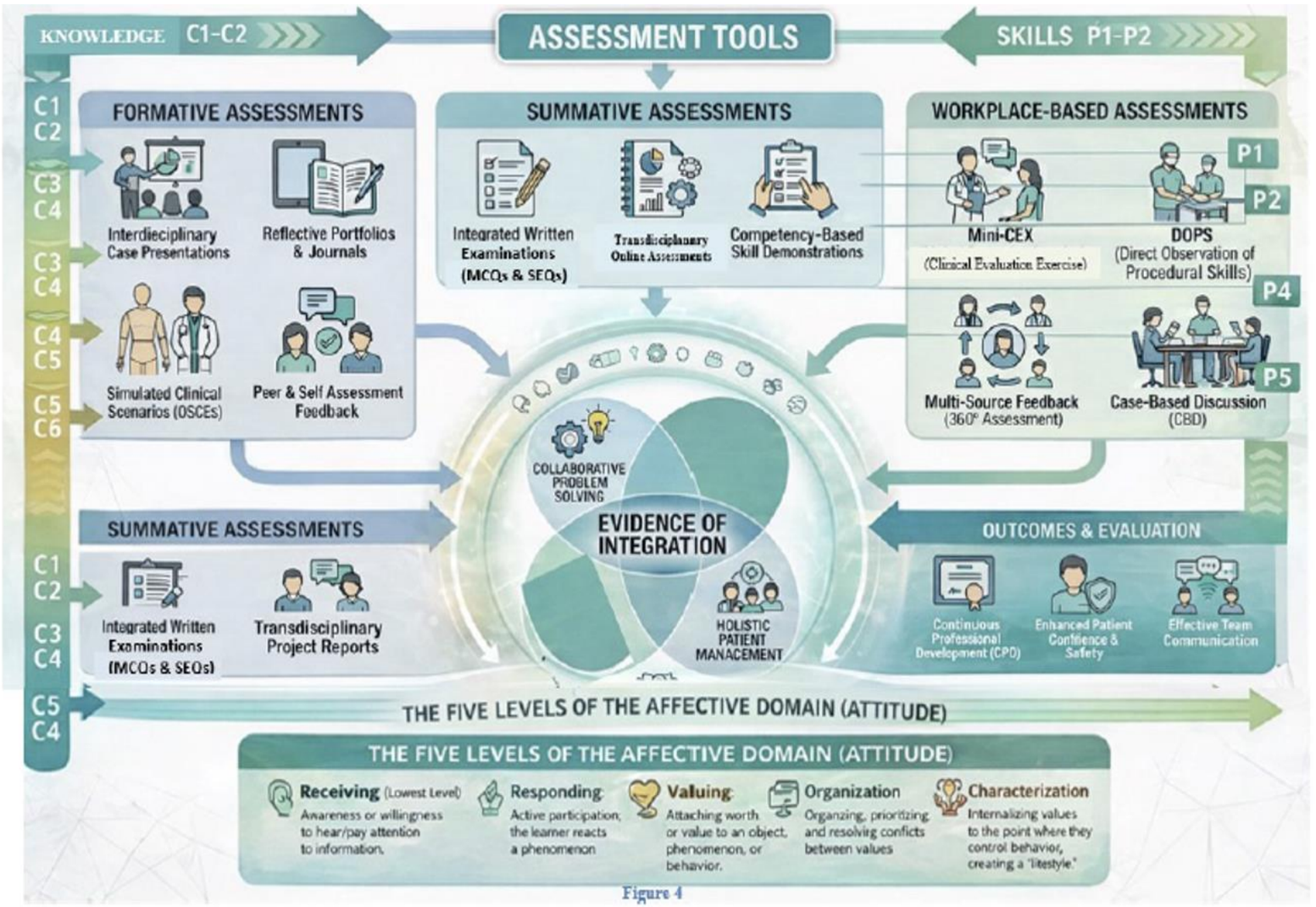

Figure 4

Figure 7 – Competency framework of RMU 12 Integrated Modular Curriculum 2026
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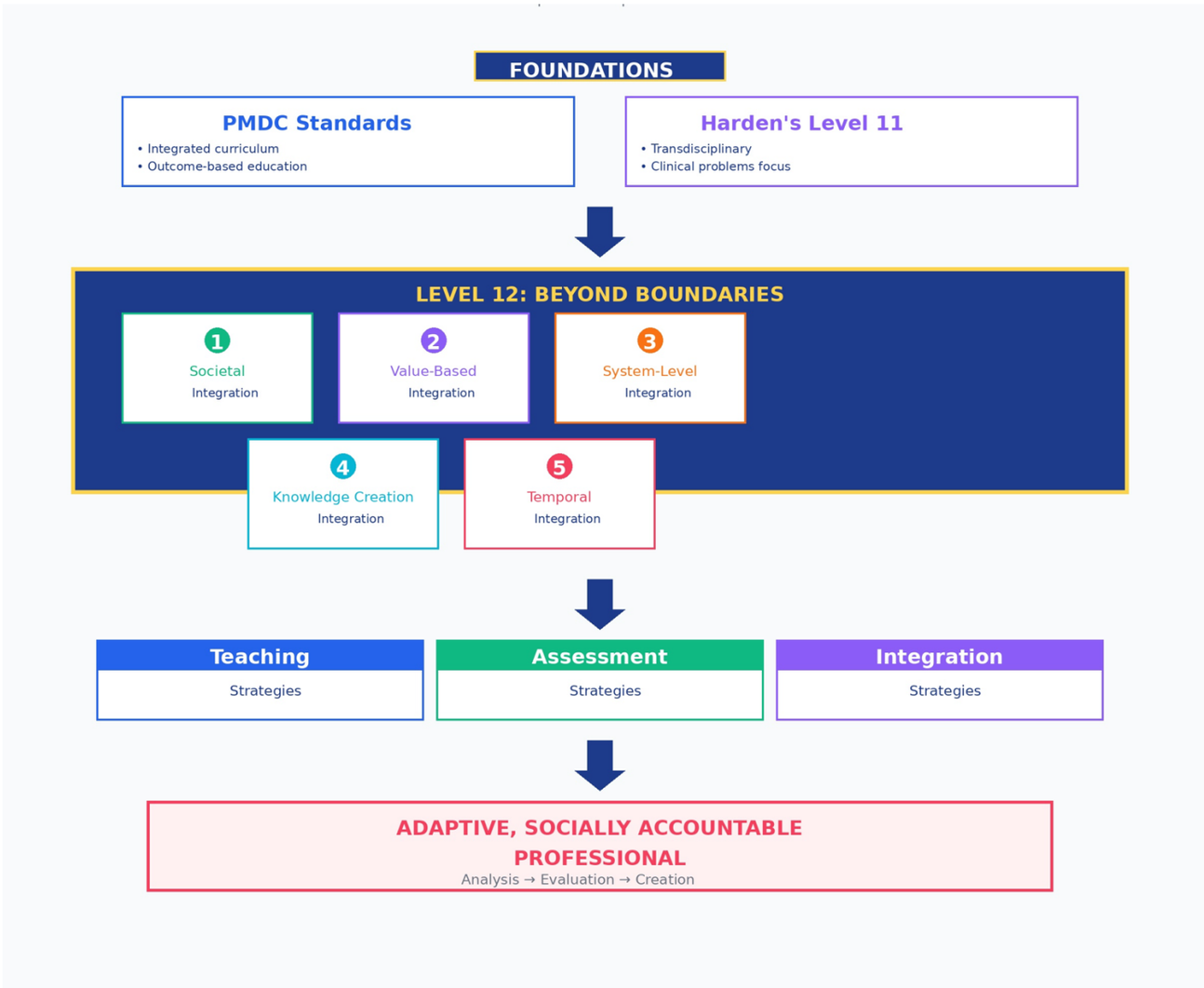

Rawalpindi Medical University has adopted a staged curricular framework that reflects a progressive movement along Harden's integration ladder, culminating in going beyond the ladder to RMU Integration level 12. The curriculum is designed to ensure that knowledge acquired in the early years is not isolated 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.

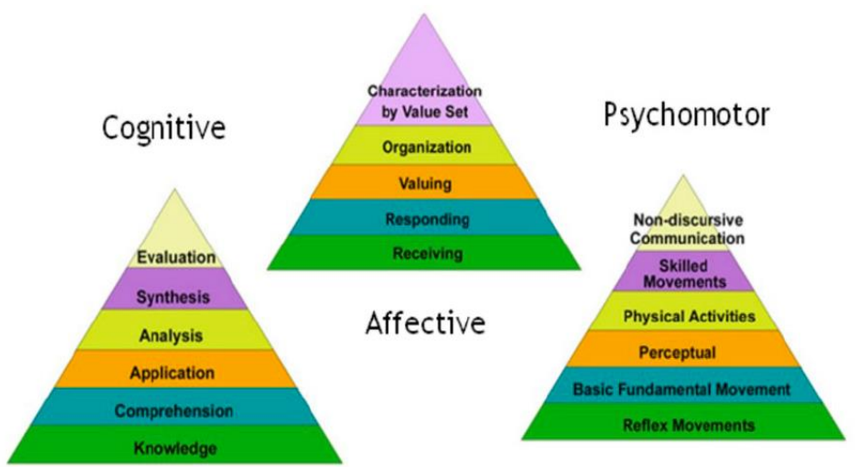

Figure 8 – Blooms Taxonomy

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.

Figure 9 – Miller's Pyramid of Clinical Competence

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.

RMU 12 Trans Contextual Integration Framework (TCIF)

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 fulfills the criteria for Level 11 on Harden's Integration Ladder and even beyond boundaries corresponding to ***RMU 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 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

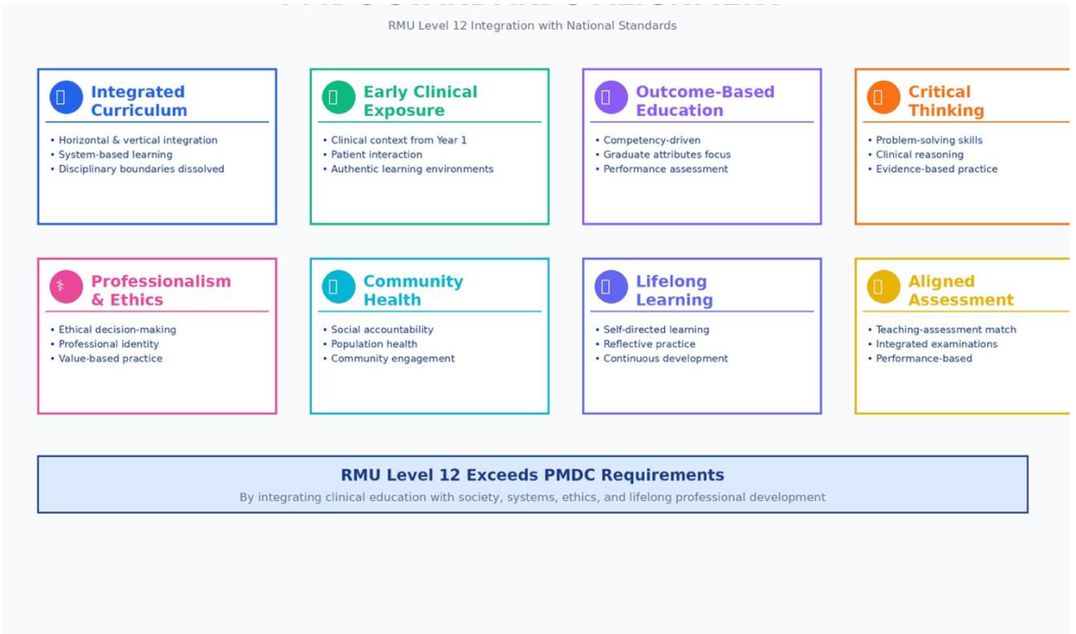
- Transcends Harden's Level 11 through integration with society, systems, ethics, and lifelong learning
- Fully aligned with PMDC undergraduate medical education standards
- Emphasizes higher-order thinking: Analysis, Evaluation, and Creation (Bloom's Taxonomy)
- Produces socially accountable, adaptive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



Harden's Integration Ladder → **RMU** → **RMU 12 Isolation to Beyond Boundaries**

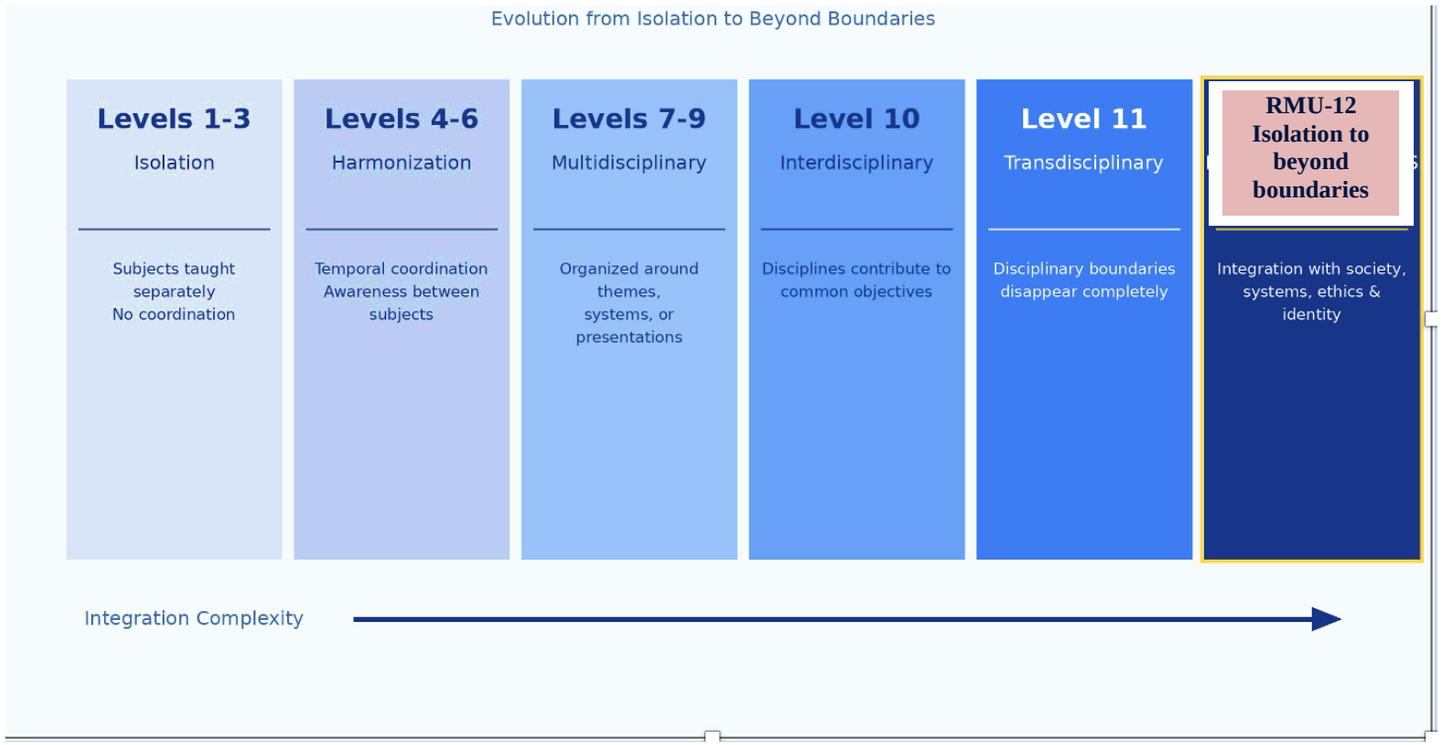


Figure 11 –RMU 12 Isolation to Beyond Boundaries

2. RMU-12 —Beyond Boundaries

2.1 Conceptual Definition

RMU 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

Figure 12 – Five Pillars of RMU 12 Integration

2.3 Five Pillars of Level 12 Integration

A. Societal Integration: Patient-in-Society Problems

Level 11: Patient-centered clinical problems

RMU 12: Patient-in-society problems

RMU Implementation: (Methodology)

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

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

B. Value-Based Integration: Contextual Ethics

Level 11: Ethics integrated within cases

RMU 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 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.

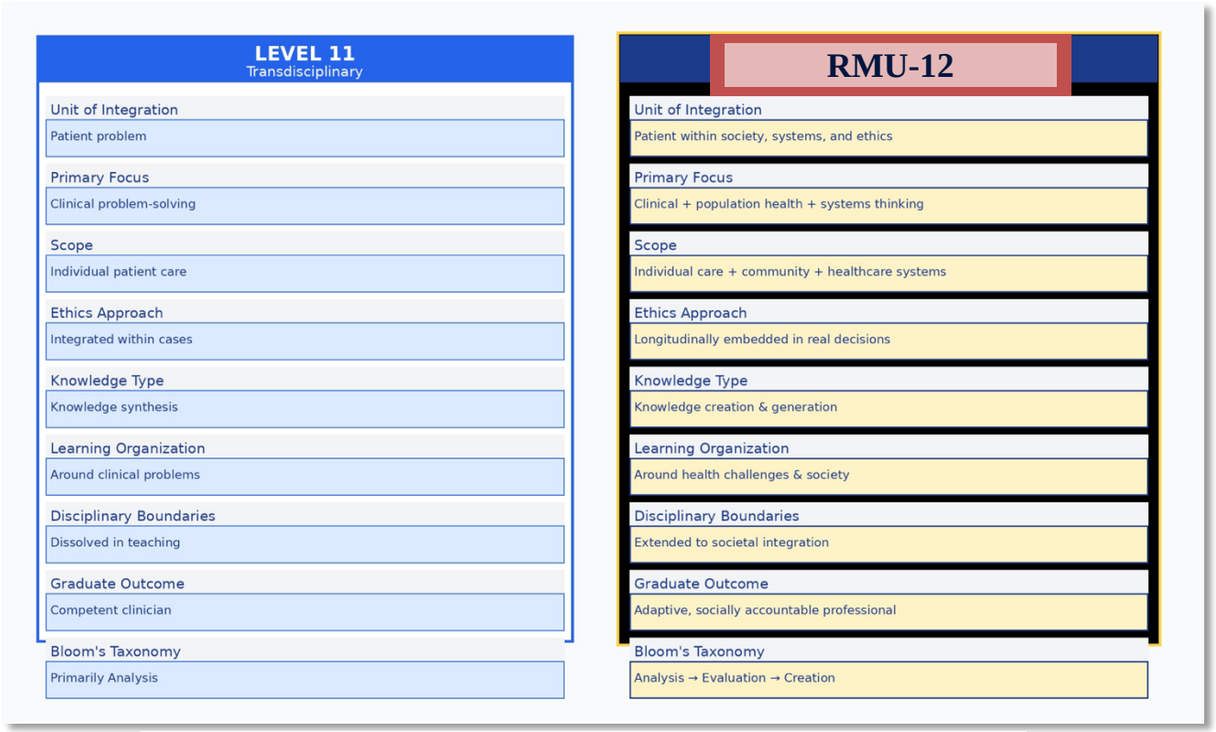


Figure 13 – Level 11 vs RMU 12

D. Knowledge Creation: Beyond Synthesis

Level 11: Knowledge synthesis

RMU 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 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

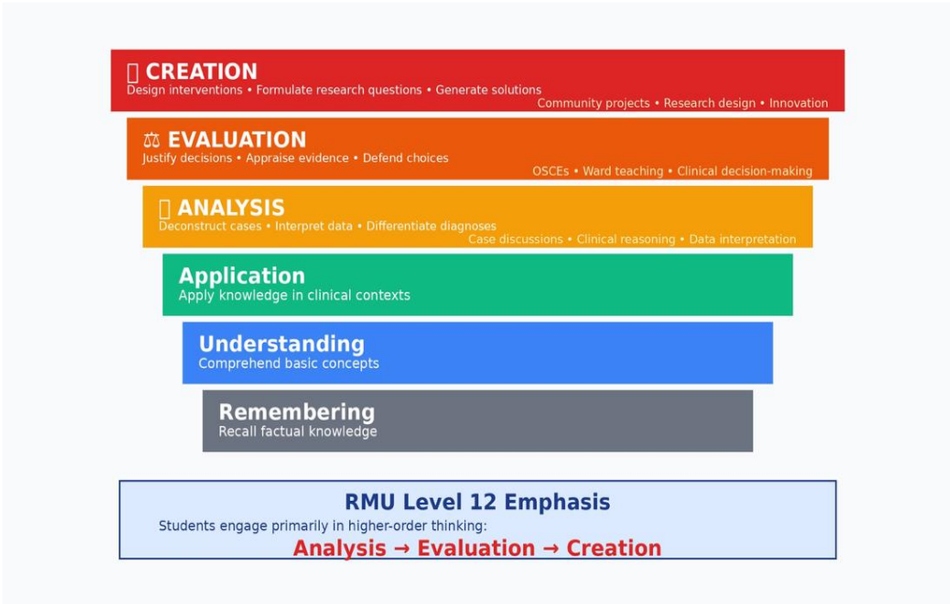


Figure 14 – Bloom's Taxonomy in RMU 12

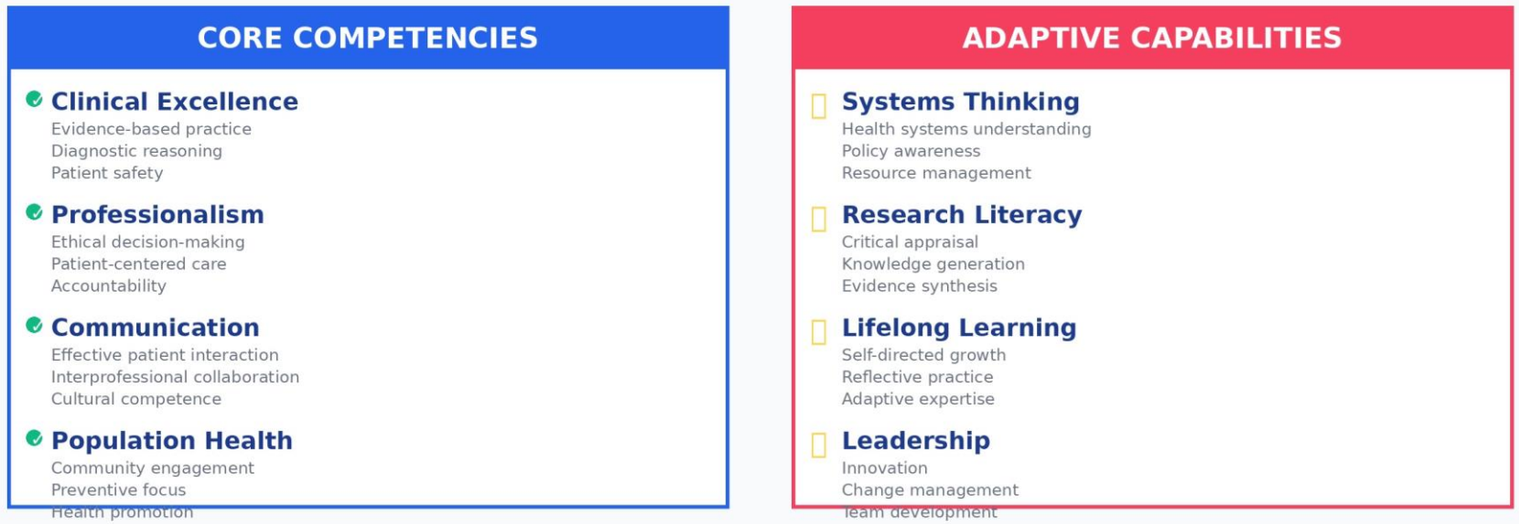


Figure 15 – Graduate Outcomes in RMU 12

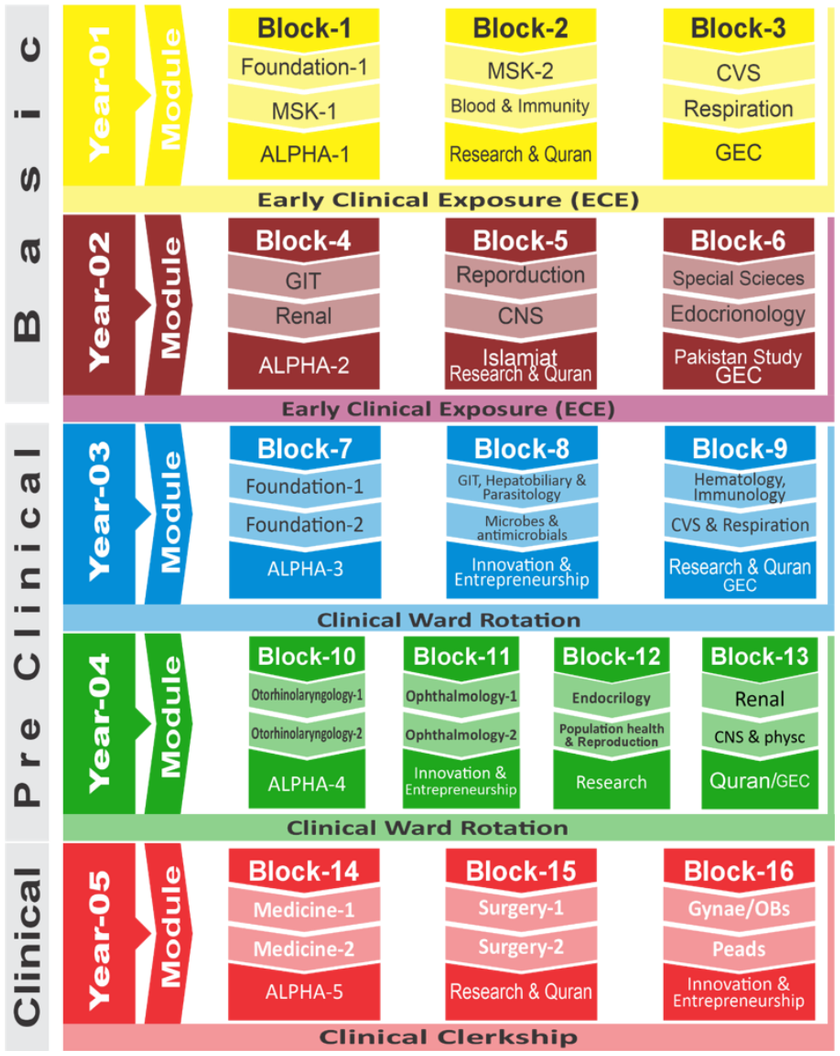


Figure 16 – Modules from basic to Clinical in RMU 12

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

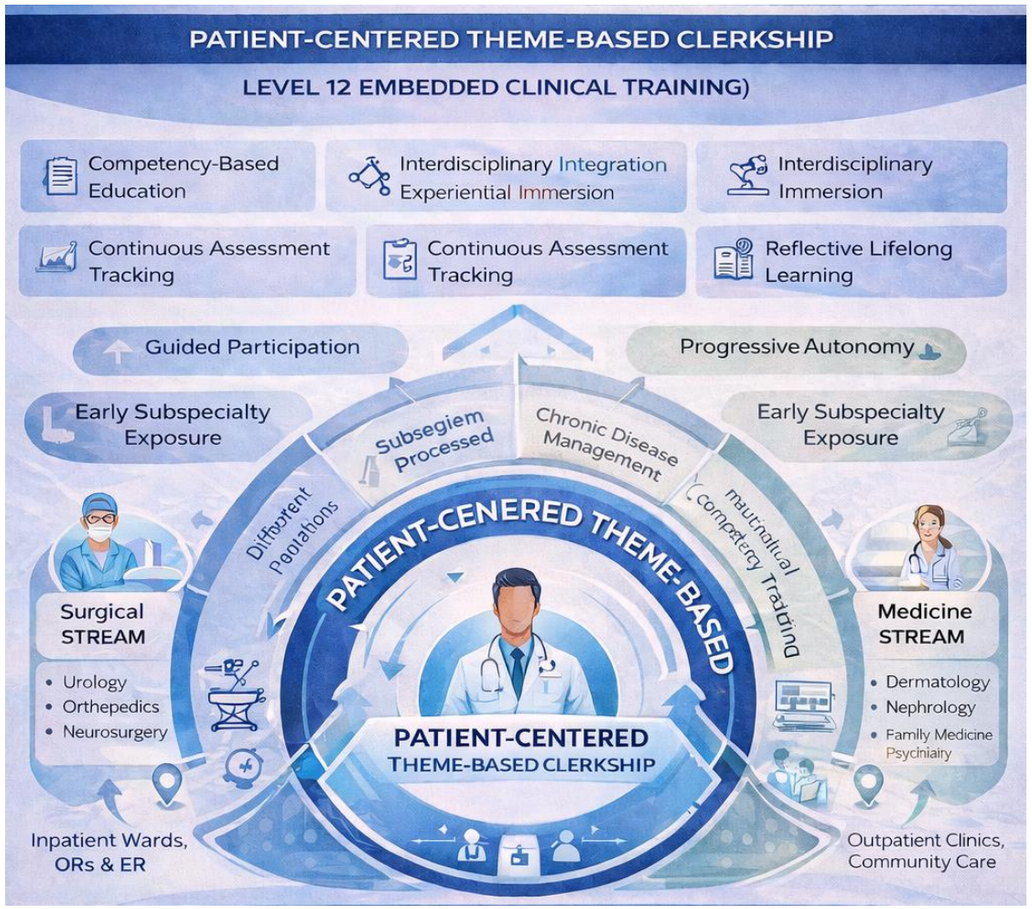


Figure 17 – RMU 12 Symptom Based Integrated Clinical Clerkship

Symptom Based Integrated Clinical Clerkship

Rawalpindi Medical University

Level 12 Clinical Clerkship

(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 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:

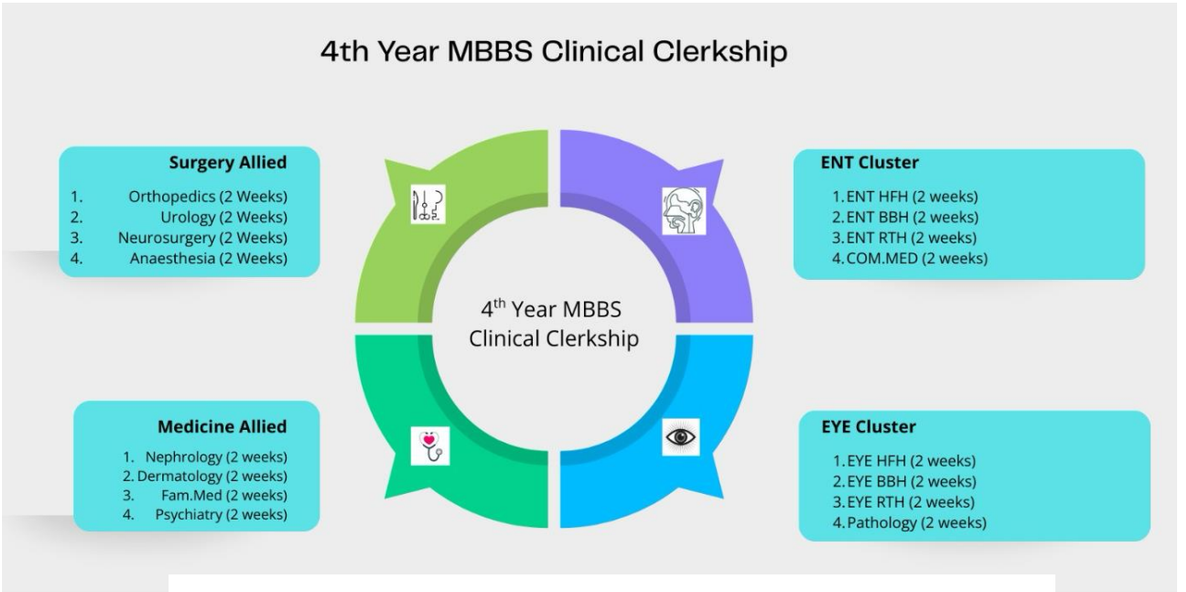


Figure 18 – 4th year MBBS Clinical Clerkship

3.1 Surgical Stream (Allied Rotations – 2 Weeks Each)

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

Specialties include:

- Urology
- Orthopedics
- Neurosurgery

Students experience:

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

3.2 Medicine Stream (Allied Rotations – 1 Week Each)

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

Specialties include:

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

Students engage in:

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

The theme-based structure ensures exposure to:

- Acute conditions
- Chronic diseases
- Surgical decision-making
- Medical management
- Community care
- Mental health integration

4. Core Learning Outcomes (RMU 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. RMU 12 Embedded Clerkship

The RMU 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 12

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

Rawalpindi Medical University

ENT RMU

Otorhinolaryngology Block-1

Integrated Clinically Oriented Modular Curriculum

4th Year MBBS 2026 (Revised)

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

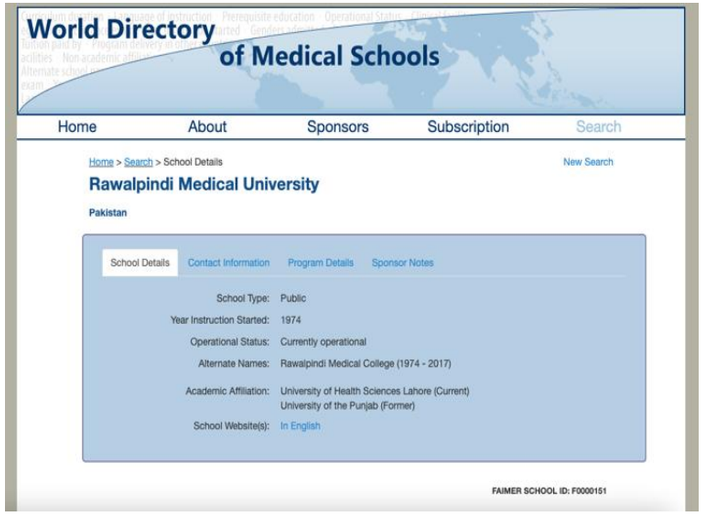
Reference Documents

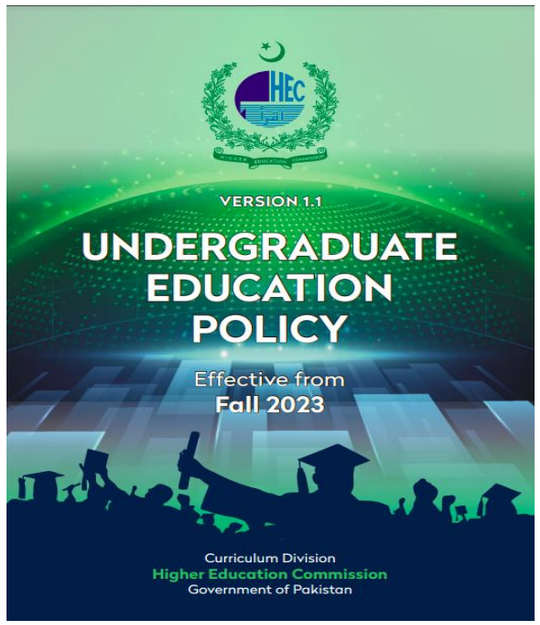
FAIMER™
A Division of Intealth

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





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

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

Figure 19 – Core competencies of a health professional

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 (Behaviour 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.

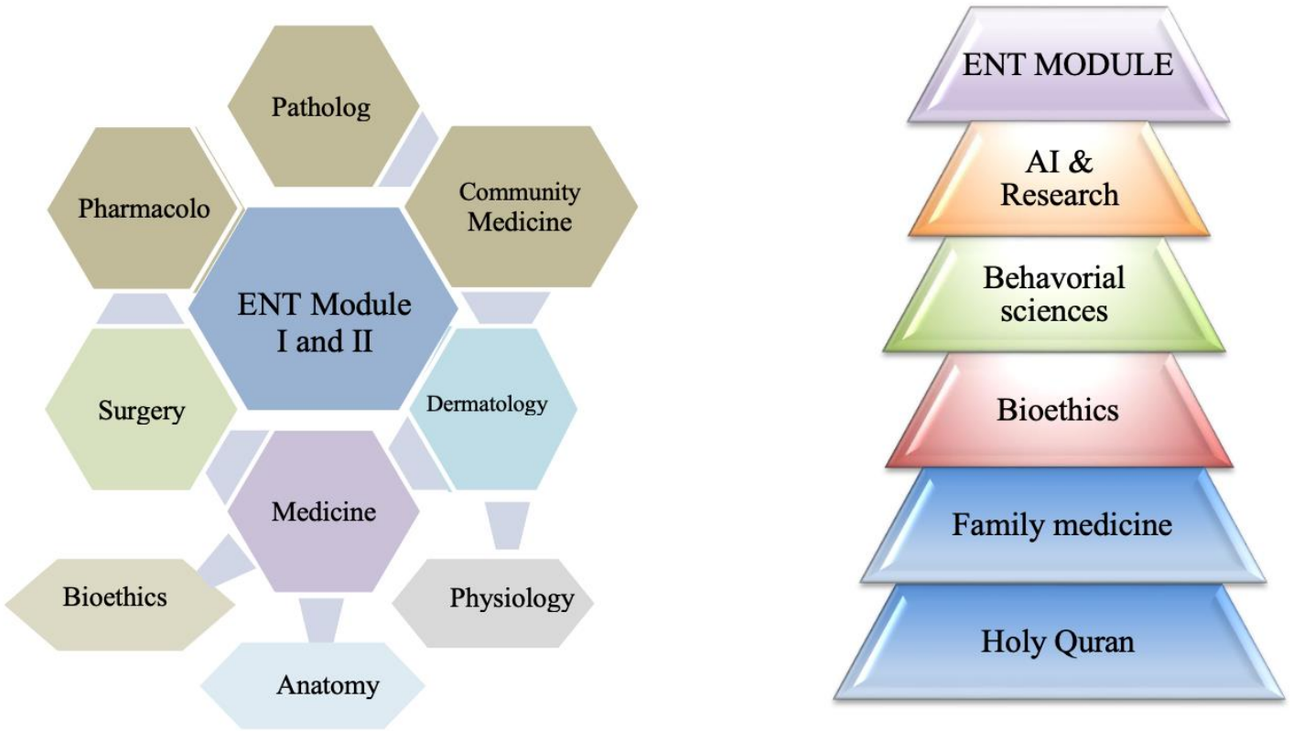


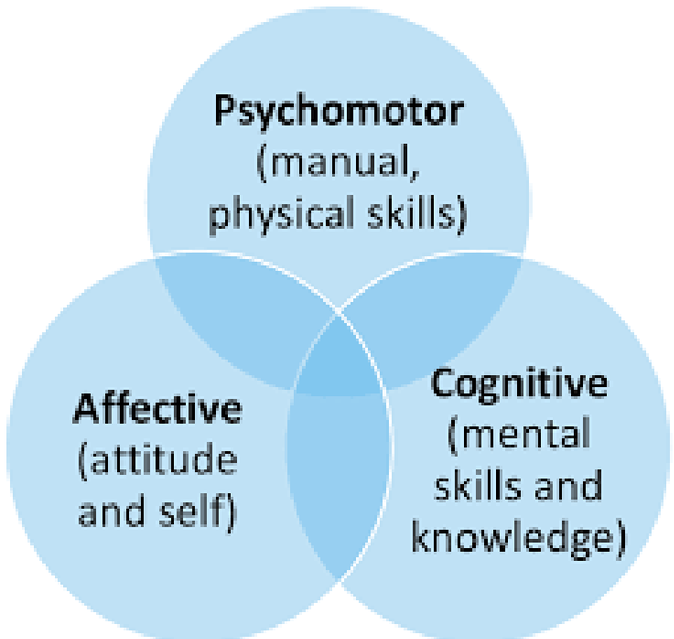
Figure 20 – Integration of Disciplines in ENT Block / Spiral Integrated Disciplines

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

Otorhinolaryngology-Block-X

Block Name : Otorhinolaryngology Block-1 (Module I-II)
Duration of module : 03 Weeks each module

Block Committee			Block Task Force Team		
1.	Vice Chancellor RMU	Prof. Dr. Muhammad Umar	1	Coordinator	Dr. Ashar Alamgir
			2	Co-Coordinator	Dr Farhat Jabeen, Dr Namra Asif, Dr Maimoona Shafqat
2.	Director DME	Prof. Dr. Rai Muhammad Asghar	3	DME Focal Person	Dr. Maryum Batool
3.	Convener Curriculum	Prof. Dr. Naeem Akhter	4	Coordinator Community Medicine	Dr Mehwish Riaz
4.	Dean Basic Sciences	Prof. Dr. Ayesha Yousaf			
5.	Additional Director DME	Prof. Dr. Ifra Saeed			
6.	Chairperson Otorhinolaryngology	Prof Dr Sadia Chaudhry			
7.	HOD Community Medicine	Prof Dr Rozina Shahadat	**DME Implementation Team**		
			1.	Director DME	Prof. Dr. Rai Muhammad Asghar
8.	Focal Person Otorhinolaryngology	Dr Huma	2.	Add. Director DME	Prof. Dr. Ifra Saeed
9.	Focal Person Community Medicine	Dr Sana	3.	Deputy Director DME	Dr Shazia Zaib
			4.	Module planner & Implementation Coordinator	Dr. Omaima Asif
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Rawalpindi Medical University, Rawalpindi

Prof Muhammad Umar
Vice Chancellor
Rawalpindi Medical University

1. Large Group Interactive Session (LGIS)

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

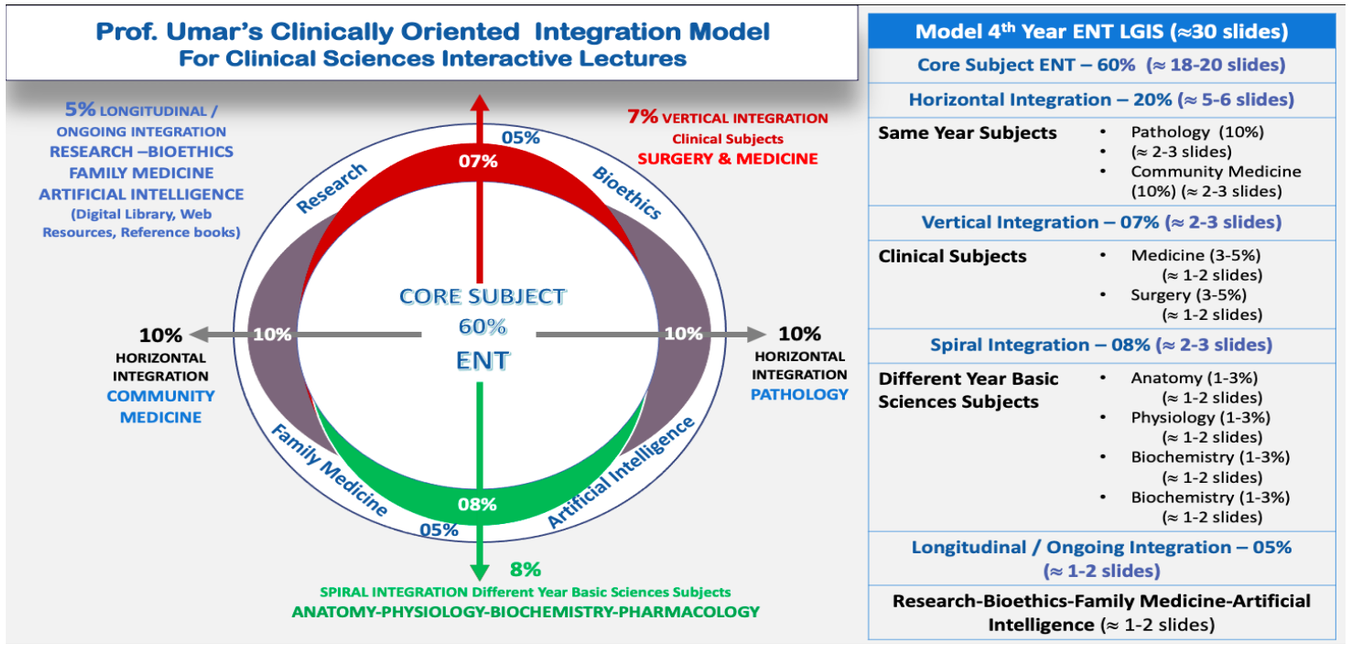


Figure 21 – Prof Umar Model of Integrated Lecture

2. Small Group Discussion (SGD)

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

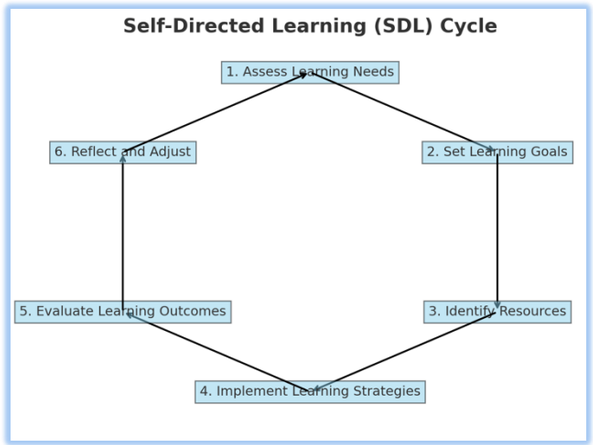
Step 1	Sharing of Learning objectives by using students Study guides	First 5 minutes
Step 2	Asking students pre-planned questions from previous teaching session to develop co-relation (these questions will be standardized)	5minutes
Step 3	Students divided into groups of three and allocation of learning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

Table 2 – Standardization of teaching content in small group discussion

Table 3. Steps of taking Small Group Discussions

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%

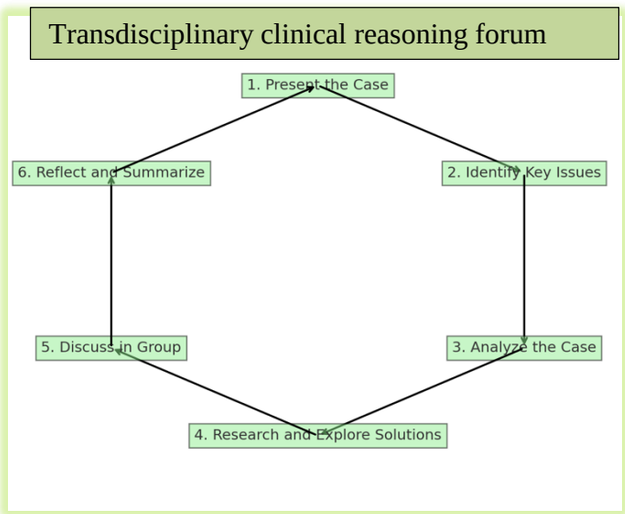
3. Self-Directed Learning (SDL)



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

  ii. OSPE station

4. Transdisciplinary Clinical Reasoning Forum (TCRF)



- 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, Teaching Strategies and Tools of Assessment

Themes For ENT

Week	Theme No.	Topics
Week 1	Theme 1	Otalgia, otorrhea, dizziness, Hearing loss
Week 2	Theme 2	Rhinorrhoea, nasal obstruction
Week 3	Theme 3	Sore throat
Week 4	Theme 4	Hoarseness, dysphagia
Week 5	Theme 5	Neck masses
Week 6	Assessment	

Theme 1:
Otalgia, Otorrhea, Dizziness , Hearing loss

Theme	Rationale	General learning objectives (SMART)
Otalgia Otorrhea Dizziness Hearing loss	Diseases of the ear constitute a major proportion of clinical workload in both primary care and specialist practice, making their understanding essential for undergraduate medical students. The ear plays a critical role in hearing and balance, functions that are fundamental to communication, learning, and quality of life. Disorders affecting the ear can lead to significant morbidity, including hearing impairment, speech delay in children, vertigo, chronic infection, intracranial complications, and permanent disability if not diagnosed and managed appropriately. In the clinical years, particularly in the 4th year MBBS, students transition from theoretical learning to patient-centered care. Teaching ear-related disorders at this stage enables students to integrate anatomy, physiology, pathology, microbiology, pharmacology, and clinical medicine into real-world clinical decision-making. Common conditions such as otitis externa, otitis media, hearing loss, tinnitus, vertigo, and tympanic membrane perforations provide excellent models for developing diagnostic reasoning, history-taking, physical examination skills (especially otoscopy), and interpretation of basic investigations such as audiometry. Early recognition of serious and life-threatening complications of ear disease—such as mastoiditis, facial nerve palsy, intracranial abscess, meningitis, and lateral sinus thrombosis—is crucial for future doctors, even those not specializing in ENT. This ensures	By the end of the ENT ear-related disorders module, the 4th-year MBBS student will be able to: ● Describe the applied anatomy and physiology of the external, middle, and inner ear with at least 80% accuracy in written or viva examinations. ● Explain the etiology, pathophysiology, and clinical features of common ear disorders including otitis externa, otitis media, chronic suppurative otitis media, hearing loss, tinnitus, and vertigo during structured assessments and case discussions. ● Elicit a focused history and perform a complete ear examination, including otoscopy, correctly in at least 3 out of 4 observed clinical encounters by the end of the clinical rotation. ● Demonstrate tuning fork tests (Rinne, Weber, and Absolute Bone Conduction) accurately in an OSCE station within the allocated time. ● Interpret basic audiological investigations, including pure tone audiograms, with a minimum of 75% accuracy in formative or summative assessments. ● Identify red-flag signs, symptoms, and complications of ear diseases (e.g., facial nerve palsy, intracranial spread) and initiate appropriate referral decisions in simulated or real clinical scenarios. ● Outline appropriate first-line medical management and indications for surgical referral for common ear conditions according to undergraduate-level guidelines.

	timely referral, appropriate initial management, and prevention of morbidity and mortality. Furthermore, ear disorders are highly prevalent in the community, especially in developing countries, where chronic suppurative otitis media and preventable hearing loss remain major public health concerns. Teaching these conditions fosters awareness of preventive strategies, health education, vaccination, early screening, and community-based interventions. Inclusion of ear-related disorders in the 4th year ENT curriculum therefore equips medical students with essential competencies in: Clinical examination and procedural skills Diagnostic reasoning Emergency recognition and referral Preventive and community health perspectives Multidisciplinary patient management This foundation is vital for producing competent, safe, and socially responsible physicians capable of managing common ENT problems and recognizing serious pathology in both hospital and community settings.	• Apply principles of infection prevention, hearing conservation, and patient education during ward rounds and outpatient encounters. • Demonstrate professional behavior, effective communication, and ethical practice while interacting with patients suffering from ear disorders, as assessed by faculty feedback.

Code	Topic	Learning objectives At the end of the lecture the student should be able to	Learning domain	Teaching strategy	Assessment tool
M1-ENT-001	Endoscopic anatomy of middle ear	• Define middle ear cleft • Elaborate parts of middle ear • Discuss physiology of middle ear	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-002	Anatomy and physiology of ear and vestibular system	• Describe parts of ear and vestibular system • Discuss functions of cochlea and vestibular system • Understand biochemical processes of cochlea and vestibular system	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-003	Acute otitis externa Malignant otitis externa	• Define acute otitis externa and malignant otitis externa • Describe clinical features, diagnosis, investigations • Pen down management plan	C1 C2 C3	LGIS	SAQ MCQ OSCE
	Acute otitis media	• Define acute otitis media and otitis media with effusion	C1	LGIS	SAQ

M1-ENT-004	Otitis Media with effusion Eustachian tube catarrh	• Describe Clinical features, diagnosis, investigations • Pen down Management plan	C2 C3		MCQ OSCE
M1-ENT-005	Chronic otitis media	• Define chronic otitis media • Describe Clinical features, diagnosis, investigations • Pen down Management plan	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-006	Complications of chronic otitis media	• Explain different types of complications of chronic otitis media • Describe Clinical features, diagnosis, investigations • Pen down Management plan	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-007	Facial nerve palsy	• Describe Anatomy of facial nerve, types of facial nerve palsy • Explain Clinical features, diagnosis, investigations • Pen down Management plan	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-008	Otosclerosis	• Define otosclerosis, types, pathophysiology • Describe clinical features, diagnosis, investigations • Pen down Management plan	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-009	Sensorineural hearing loss Noise induced hearing loss Meniere's disease Drug induced hearing loss	• Define sensorineural, noise induced, drug induced hearing loss, Meniere's disease • Describe Clinical features, diagnosis, investigations • Pen down Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0010	Types of mastoidectomies	• Describe Canal wall up, canal wall down mastoidectomies • Explain Investigations before mastoid exploration • Enlist steps of Post operative care	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0011	Pure tone audiometry Tympanometry BERA test ASSR test	• Explain Hearing assessment methods and tests • Interpret Types of graphs • Explain Clinical implications and diagnoses	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0012	Hearing aids Cochlear implant	• Enlist Types of hearing aids • Enumerate Parts of cochlear implant • Explain Indication of hearing aids and cochlear implant	C1 C2 C3	LGIS	SAQ MCQ OSCE

Community Medicine:
Theme-1

Code	Topic	Contents Outlines (Major Topics & Sub- Topics)	Learning objectives After the Session Students Will Be Able To:	Learning domain	Teaching strategy	Assessment tool
M1-CM-0001	**Introductory lecture**	• Intro to the subject of community medicine & public Health. • Intro to IUGRC Scheme of learning	• Comprehend the definitions explaining the subjects. • Identify applications of practices of Public Health. • Follow the scheme of learning & assessment CM over the year. • Follow scheme of learning IUGRC.	C1 C2 C2 C2	LGIS	MCQs, SEQs, OSPE Viva
M1-CM-0002	**Fundamental concepts of Preventive medicine- I**	• Health & Disease • Wellbeing & Positive Health • Dimensions of health	• Describe public health aspects of Health & disease. • Explain health wellbeing and positive Health with examples • Explain dimensions of health	C1 C2 C1	LGIS	MCQs, SEQs, OSPE Viva
M1-CM-0003	**Fundamental concepts of Preventive medicine- II**	• Health Assessment (Indicators) • Quality of life indicators • Health indicators • Approaches to disease prevention & control	• Explains attributes of good statistical indicators of health & disease • Describe health indicators • Comprehend & calculate health indicators & Indexes • Explains public health approaches to diseases prevention	C2 C1 C3 C2	LGIS	MCQs, SEQs, OSPE Viva
M1-CM-0004	**Levels of disease prevention Intervention**	• Natural History of disease • Models of Disease causation • Levels of prevention	• Explains natural history disease concepts in context of prevention. • Explains models of disease causation with examples. • Apply levels of prevention and modes of intervention	C2 C2 C3	LGIS	MCQs, SEQs, OSPE Viva

M1-CM-0005	**Hearing loss due to noise pollution**	• Properties of noise • Effect of noise exposure	• Define noise and explain its sources • Describe properties of noise • Apprehend auditory & non auditory effects of noise exposure • Recommend approaches of noise control	C1 C2 C3 C3	LGIS	MCQs, SEQs, OSPE, Viva

Peer assisted learning (PAL)* IUGRC Contact Session

Indictors of accomplishment Prior readings / assigned work	**Learning objectives/ competencies**	**Learning outcomes**	**Assessment strategy**
SESSION 1* Understand importance of Health Research for medical students	Review to Health Research Methodology	Students will be able to 2. Define 'health research' 3. Prioritize and select a research topic 4. Understand FINER Criteria for research question 5. Describe steps of conducting health research 6. Outline summary of a health research proposal 7. Describe the main components of a research report	1. MCQ in end of block exam 2.Viva exam at the end of the session

Thematic Integrated Large Group Session (TILGS) -Aligned to ENT

Theme 1

Community Medicine	Alignment with ENT Theme 1	Type of Integration	Integrated Learning Objective (Students will be able to…)
Introduction to Public Health	Indirect alignment	Conceptual background	Explain the public health significance of hearing disorders and ear infections in the community.
Preventive medicine (health & disease)	Aligns with otitis prevention	Primary prevention	Identify primary preventive measures to reduce incidence of otitis media in children.
Health indicators	Indirect	Population burden of hearing loss	Interpret basic health indicators related to hearing impairment and discuss their implications for service planning.
Concept of prevention & mode of intervention	Strong alignment with otitis media and noise-induced hearing loss	Primary + Secondary prevention	Differentiate levels of prevention (primary, secondary, tertiary) in the context of ear infections and hearing loss.
Hearing loss due to noise pollution	**Direct alignment with SNHL topic**	Strong horizontal integration	Correlate occupational and environmental noise exposure with sensorineural hearing loss and propose community-level preventive strategies.

Pharmacology	Alignment with ENT Theme 1	Type of Integration	Integrated Learning Objective (Students will be able to…)
Antihistamines in ENT	Aligns with allergic rhinitis, Eustachian catarrh, OME	Symptom control / Adjunct therapy	Explain the role of antihistamines in Eustachian tube dysfunction and otitis media with effusion.
Effect of histamine & antihistamine (experimental basis)	Indirect mechanistic understanding of inflammation	Mechanistic integration	Describe the pharmacodynamic action of histamine and antihistamines in inflammatory conditions affecting the ear.
Antibiotic therapy in otitis media/externa (implicit within ENT discussions)	Direct alignment with acute otitis media, malignant otitis externa	Therapeutic integration	Select appropriate first-line antibiotics for acute otitis media and justify duration of therapy.
Ototoxic drugs (drug-induced hearing loss)	Direct alignment with SNHL topic	Risk-awareness integration	Identify commonly used ototoxic drugs and correlate their mechanism of action with sensorineural hearing loss.

Analgesics & anti-inflammatory drugs	Aligns with otalgia management	Symptom-based integration	Outline rational use of analgesics in management of acute ear pain.
Vestibular suppressants (e.g., antihistaminics, betahistine)	Aligns with vertigo management	Therapeutic integration	Explain pharmacologic principles in symptomatic management of vertigo.

Clinico-Connect Transdisciplinary Clinical Reasoning Forums (CC-TCRF)
Theme 1

Theme	Week	Topics	Clinical Case Scenario
Theme 1	Week 1	Otalgia, otorrhea, dizziness, Hearing loss	A female diabetic with otalgia, ear discharge

"Managing a Severe Ear Infection in a Patient with Uncontrolled Diabetes

Clinical Scenario:

A 28-year-old woman presents with severe, persistent left-sided ear pain for three weeks. The pain is deep, worse at night, and not relieved by routine analgesics. She reports foul-smelling discharge from the same ear.
She has longstanding diabetes mellitus and admits irregular medication use. Her recent laboratory results show poor glycemic control.
On examination, she appears distressed. The ear canal is swollen and tender with unhealthy granulation tissue. Facial movement on the left appears slightly weak.
Inflammatory markers are elevated. Imaging demonstrates bony involvement of the external ear canal extending toward the skull base. Microbiological analysis identifies a bacterial pathogen.
She requires hospital admission for intensive medical management.

Student Task (Problem-Based Trigger)

Students are asked to:

1. Identify the key clinical concerns in this patient.
2. Explain why this infection has become severe.
3. Interpret the imaging findings in relation to symptoms.
4. Develop a comprehensive management plan.
5. Anticipate potential complications.
6. Counsel the patient regarding long-term disease control.
7. Suggest preventive strategies at community level.

What Makes This RMU-12

- No subject headings.
- Knowledge domains are embedded within clinical reasoning.
- The organizing principle is the **patient problem**, not disciplines.
- Learning mimics authentic clinical decision-making.

Students integrate:

- Anatomy (implicitly)
- Pathophysiology (implicitly)
- Pharmacotherapy (within management)
- Radiological Imaging interpretation (within reasoning)
- Internal Medicine (within management)
- Public health (within prevention)

But none are taught separately.

Teaching Format

- Small group facilitated learning
- Faculty from different backgrounds present but not teaching in silos
- Students build the care pathway themselves
- Assessment based on competence and clinical reasoning

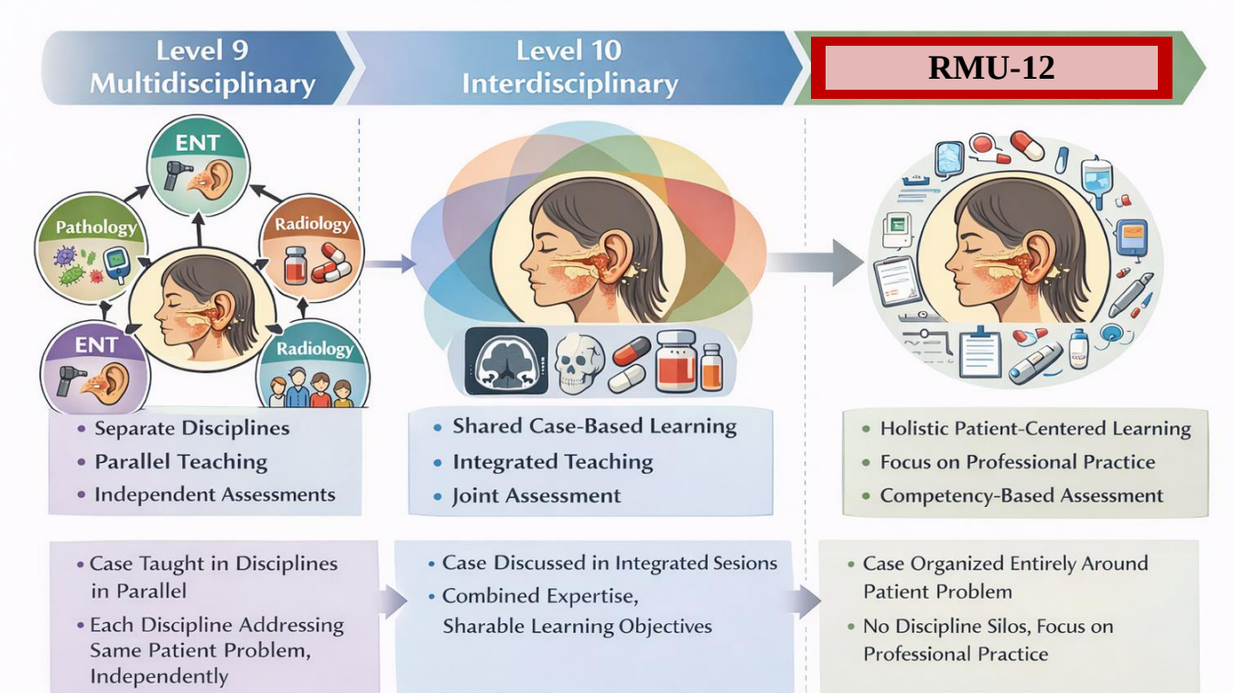


Figure 22 – Progression in Integration Approaches in Medical Education

Academic Justification Statement

"The case has been designed to reflect RMU-12, where learning is structured around authentic patient problems rather than disciplinary categories. Knowledge from biomedical, clinical, and public health domains is integrated seamlessly within professional practice."

Subject Contribution In CC-TCRF Session -1

Subject / Discipline	Nature of Contribution	Approximate Integration Weight (%)	Rationale for Weight
Otorhinolaryngology (ENT)	Core diagnostic reasoning, examination, management pathway	**30%**	Organizing clinical discipline; primary decision-making domain
Medicine (Diabetes)	Glycemic control, systemic risk factor modulation	**20%**	Infection severity strongly linked to metabolic status
Pathophysiology	Mechanism of invasive infection & osteomyelitis	**10%**	Explains disease progression in diabetic milieu
Microbiology	Pathogen identification & antimicrobial targeting	**10%**	Directly influences therapeutic decisions
Pharmacology	Antibiotic selection, IV therapy principles	**10%**	Essential for management planning
Radiology	Imaging interpretation & skull base involvement	**8%**	Guides severity assessment & monitoring
Anatomy (Applied)	Spread to skull base, facial nerve involvement	**7%**	Supports clinical interpretation of symptoms
Public Health / Preventive Medicine	Community diabetes control strategies	**5%**	Preventive extension beyond acute care

Subject-Wise Specific Learning Objectives-1

Subject	Domain	Specific Learning Objectives (Students will be able to…)	Bloom's Level	Integration Role
Otorhinolaryngology (ENT)	Clinical Skills & Reasoning	Recognize clinical features suggestive of malignant otitis externa	Analyze	Core organizing discipline
		Differentiate simple otitis externa from invasive infection	Analyze	
		Perform otoscopic examination and describe abnormal findings	Apply	
		Formulate comprehensive ENT management plan	Evaluate	

		Identify indications for hospital admission	Evaluate	
Medicine (Diabetes)	Clinical Integration	Explain how uncontrolled diabetes predisposes to severe infection	Understand	Systemic driver
		Interpret laboratory indicators of poor glycemic control	Analyze	
		Outline inpatient glycemic optimization strategies	Apply	
Pathophysiology	Mechanistic Understanding	Describe mechanisms of impaired immunity in diabetes	Understand	Explains severity
		Explain progression from soft tissue infection to osteomyelitis	Analyze	
Microbiology	Diagnostic Reasoning	Identify common pathogens in malignant otitis externa	Remember/Understand	Guides therapy
		Interpret culture and sensitivity report	Analyze	
		Justify choice of targeted antimicrobial therapy	Evaluate	
Pharmacology	Therapeutics	Outline appropriate IV antibiotic regimen	Apply	Management planning
		Explain rationale for prolonged antibiotic duration	Analyze	
		Identify potential drug interactions in diabetic patients	Analyze	
Radiology	Investigation Interpretation	Interpret CT findings showing bony erosion	Analyze	Confirms severity
		Correlate imaging findings with clinical symptoms	Analyze	
Anatomy (Applied)	Structural Correlation	Describe anatomical spread of infection to skull base	Understand	Supports reasoning
		Explain facial nerve course relevant to this case	Understand	
Public Health	Prevention	Propose preventive strategies for diabetic patients	Apply	Community extension
		Suggest community-level interventions for glycemic control	Create	

Theme 2:
Rhinorrhoea, Nasal Obstruction

Theme	Rationale	General learning objectives (SMART)
Rhinorrhea Nasal obstruction	Nose-related disorders are among the most common conditions encountered in clinical practice, particularly in outpatient and emergency settings. Diseases such as rhinitis, sinusitis, epistaxis, nasal trauma, deviated nasal septum, nasal polyps, and sinonasal tumors significantly affect patient comfort, respiratory function, olfaction, and overall quality of life. In developing countries, allergic rhinitis, infective sinus disease, and epistaxis remain highly prevalent and contribute substantially to morbidity. The nose plays a critical role in respiration, olfaction, phonation, and defense of the lower airway. Its close anatomical relationship with the orbit, cranial cavity, and paranasal sinuses makes nasal diseases potentially life-threatening if complications such as orbital cellulitis, cavernous sinus thrombosis, or intracranial spread are not recognized early. Inclusion of nose-related disorders in the ENT theme curriculum enables 4th-year MBBS students to acquire essential knowledge and clinical skills required for accurate diagnosis, initial management, and timely referral. Emphasis is placed on developing competencies in nasal examination, management of epistaxis, interpretation of radiological investigations, and	By the end of the ENT nose-related disorders module, the 4th-year MBBS student will be able to: ● Describe the applied anatomy and physiology of the nose and paranasal sinuses with at least 80% accuracy in written or viva examinations. ● Explain the etiology, pathophysiology, and clinical features of common nasal disorders including rhinitis, sinusitis, epistaxis, deviated nasal septum, nasal polyps, and nasal trauma during structured case-based discussions. ● Elicit a focused nasal history and perform a complete nasal examination, including anterior rhinoscopy, correctly in at least 3 out of 4 supervised clinical encounters by the end of the rotation. ● Demonstrate initial management of epistaxis, including first-aid measures and nasal packing principles, accurately in an OSCE or simulated clinical station. ● Interpret basic radiological investigations relevant to nasal and sinus diseases (e.g., X-ray PNS, CT scan of paranasal sinuses) with a minimum of 75% accuracy in assessments. ● Identify red-flag symptoms and signs suggestive of complications or malignancy (e.g., unilateral nasal obstruction, recurrent epistaxis, orbital symptoms) and initiate timely referral in clinical scenarios. ● Outline principles of medical management and indications for surgical intervention for common nose-related disorders at the undergraduate competency level. ● Apply preventive strategies and patient education related to allergic rhinitis, sinusitis, and nasal hygiene during outpatient and ward-based interactions. ● Demonstrate professional behavior, effective communication, and ethical practice while managing patients with nasal complaints, as assessed through faculty feedback.

	recognition of red-flag symptoms. This training prepares future medical graduates to manage common nasal conditions safely, contribute to preventive care, and reduce complications associated with delayed or inappropriate treatment.	

Code	Topic	Learning Objectives At the end of one hour lecture students should be able to	Learning domain	Teaching strategy	Assessment tool
M1-ENT-0013	Anatomy and physiology of nose and paranasal sinuses	• Anatomy of nasal septum, nasal cavity, paranasal sinuses • Physiology of nasal septum, nasal cavity, paranasal sinuses • Clinical aspects of anatomical variations	C1 C2 C3	LG IS	SAQ MCQ OSCE
M1-ENT-0014	Snoring and sleep apnoea	• Definition of snoring and sleep apnoea • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LG IS	SAQ MCQ OSCE
M1-ENT-0015	Nasopharyngeal angiofibroma	• Origin of nasopharyngeal angiofibroma • Clinical features, diagnosis, investigations • Management plan	C1 C2 C3	LG IS	SAQ MCQ OSCE
M1-ENT-0016	FESS	• Definition of FESS • Steps of FESS • Complications of FESS	C1 C2 C3	LG IS	SAQ MCQ OSCE
M1-ENT-0017	Deviated Nasal Septum Rhinoplasty	• Definition of deviated nasal septum, rhinoplasty • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LG IS	SAQ MCQ OSCE
M1-ENT-0018	Acute and chronic rhinosinusitis	• Definition of acute and chronic sinusitis • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0019	Nasal polyps Allergic Infective	• Types and pathophysiology of nasal polyps • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE

M1-ENT-0020	Complications of rhinosinusitis	• Enumerate complications of rhinosinusitis • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0021	Allergic rhinitis	• Definition of Allergic Rhinitis • Pathophysiology • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0022	Radiology of nose and PNS	• Important investigations done for nose and PNS • Indications and findings • Recent advances	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0023	Septal hematoma Septal abscess	• What is Septal hematoma, septal abscess • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0024	Basal cell carcinoma Squamous cell carcinoma	• What is BCC, SCC nose • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE

Community Medicine
Theme 2:

CODE	TOPIC	Contents Outlines (Sub-Topics)	Learning objectives After the Session Students Will Be Able to:	Learning domain	Teaching strategy	Assessment tool
M1-CM-0006	**Fundamental Concepts & Uses of Epidemiology**	• Definition of epidemiology • Explanation of concepts of Time- place-Person • Epidemiologic approach to health	• Explains epidemiology as a fundamental science of public health. • Explain major concepts embodied in definition. • Comprehend & explains epidemiologic approach to health problems • Enumerate uses of epidemiology	C2 C2 C2 C1	LGIS	MCQs, SEQs, OSPE Viva
M1-CM-0007	**Introduction to Epidemiologic Methods descriptive studies**	• Epidemiologic Methods / studies • Descriptive epidemiology- types & steps of descriptive studies • Steps	• Classify epidemiological study designs • Explain two methods of undertaking descriptive studies. • Explain steps of undertaking a descriptive study • Construct 2x2 contingency table for cross-sectional comparative studies • Perform cross-tabulation • Interpret the findings of 2x2 table • Construct etiological hypothesis	C2 C2 C2 C3 C3 C3 C1	LGIS	MCQs, SEQs, OSPE Viva
M1-CM-0008	**Droplet infections- I**	• Smallpox • Chicken Pox • measles	● Understand important concepts & definitions of droplet infections ● Explain the strategy adopted for eradication of smallpox. ● Describe the WHO response in case of any bioterrorism. ● Describe the epidemiology determinants of chicken pox & measles. ● Explain modes of transmission and incubation period of chicken pox & measles. ● Recommend prevention and control measures of chicken pox & measles in community & institutional outbreaks ● Appraise the steps of WHO Measles Elimination Strategy in the community.	C2 C3 C2 C2 C2 C3 C3	LGIS	MCQs, SEQs, Viva Voce and OSPE

M1-CM-0009	**Droplet infections- II**	• Rubella • Pertussis • Mumps	• Describe epidemiology determinants of mumps, rubella, and pertussis. • Explain the modes of transmission and incubation period of mumps, rubella, and pertussis. • Identify the high-risk individuals to get rubella, pertussis, mumps. • Diagnose the cases based on signs/ symptoms & complications • Apply prevention and control measures of mumps, rubella, and pertussis in community. • Explain Congenital Rubella Syndrome (CRS) as public health issue.	C2 C1 C2 C3 C3 C3	LGIS	MCQs, SEQs, OSPE and Viva Voce
M1-CM-0010	**Droplet infections- III**	• Tuberculosis	• Describe the public health importance of Tuberculosis in global and local context. • Describe the epidemiological determinants of Tuberculosis. • Identify the risk factors and high-risk population of the disease. • Explain significance, procedure & incubation period of Monteux test • Recommend prevention and control of Tuberculosis in community. • Appraise components of End TB Strategy. Including TB-DOTs strategy. • Differentiate primary, secondary drug resistance and MDR-TB and XDR-TB.	C2 C2 C2 C2 C3 C3 C2	LGIS	MCQs, SEQs, OSPE and Viva Voce

Peer assisted learning (PAL)* IUGRC Contact Session

Indictors of accomplishment Prior readings / assigned work	Learning objectives/ competencies	Learning outcomes	Assessment strategy
SESSION II* 1. Able to reflect on Elements of proposal writings. 2. Reflect on relevant literature search and on some articles close to topic of interest. 3. Reflect on point to research topic selection.	Interactive discussion on how to; 1. How to and what literature / sources reviewed for topic selection. 2. To perform advanced search option to modify, refine the topic & search for new ideas/perspectives 3. organize research idea or general thought into a topic that can be configured into research problem / formulating research question 4. brief outline of study proposal in chronological order 5. develop data collection tool 6. do reflective learning	Each student be able to; 1. Develop the list of useful keywords for relevant literature search 2. Perform review of relevant Literature to refine how to approach selected topic and finding a way to analyze it. 3. review community health profile data bases, EMBASE,MEDLINE, PubMed, Google scholar Ovid, ProQuest Psych INFO, Cochrane Database, Scopus) etc. 4. identify knowledge gaps 5. formulate appropriate research questioning the form of a study proposal 6. Attempt “reflective writing.	2. MCQ in end of block block exam 3. Viva exam at the end of the session

***Session II will be taken by All Faculty**

Thematic Integrated Large Group Session (TILGS) -Aligned to ENT

Theme 2

Community Medicine	Alignment with ENT Theme 2	Type of Integration	Integrated Learning Objective (Students will be able to…)
Fundamental Concepts & Uses of Epidemiology	Indirect but relevant to disease burden of sinusitis & nasal infections	Conceptual / Population health	Explain the epidemiological patterns of upper respiratory tract infections and their relevance to ENT practice.
Introduction to Epidemiologic Methods (Descriptive studies)	Supports understanding of prevalence of allergic rhinitis & sinusitis	Analytical integration	Interpret descriptive epidemiologic data related to nasal and sinus diseases.
Droplet Infections I (Measles, Chickenpox, Smallpox)	Moderate alignment via infectious nasal symptoms	Infectious disease linkage	Correlate droplet transmission mechanisms with acute nasal and upper respiratory infections.
Droplet Infection II (Rubella, Pertussis, Mumps)	Moderate alignment (URTI presentations affecting nose & nasopharynx)	Infectious disease linkage	Identify droplet-borne diseases presenting with nasal symptoms and outline preventive strategies.
Droplet Infection III (Tuberculosis)	Strong alignment (nasopharyngeal TB, chronic sinus involvement)	Strong horizontal integration	Recognize tuberculosis as a differential diagnosis in chronic nasal obstruction or nasopharyngeal masses.
Concept of Prevention & Mode of Intervention	Strong alignment with allergic rhinitis, sinusitis prevention	Primary + Secondary prevention	Differentiate primary, secondary, and tertiary prevention in context of rhinosinusitis and allergic rhinitis.
Noise pollution (indirect this week)	Minimal alignment	Weak	—

Pathology	Alignment with ENT Theme 2	Type of Integration	Integrated Learning Objective (Students will be able to…)
Neoplastic lesions of oral cavity & tonsils	Aligns with nasopharyngeal mass differentials	Mechanistic vertical integration	Differentiate benign from malignant nasopharyngeal masses based on pathological features.
Inflammatory lesions	Aligns with rhinosinusitis & nasal polyps	Inflammatory mechanism linkage	Explain the pathological basis of chronic rhinosinusitis and nasal polyp formation.
Pathologies of tonsils	Aligns with nasopharyngeal region	Structural-disease correlation	Correlate pathological changes with clinical nasal obstruction symptoms.

Tumor Biology (Implicit in JNA discussion)	Strong alignment with Nasopharyngeal Angiofibroma	Neoplastic mechanism integration	Describe vascular tumor characteristics and correlate with recurrent epistaxis.
Chronic Inflammation	Aligns with chronic sinusitis	Mechanistic understanding	Explain tissue remodeling and mucosal changes in chronic rhinosinusitis.

Family Medicine	Alignment with ENT Theme 2	Type of Integration	Integrated Learning Objective (Students will be able to…)
ENT Problems in Primary Care	Direct alignment with allergic rhinitis, sinusitis, epistaxis	Primary care integration	Identify common nasal complaints that can be managed at primary care level and initiate first-line treatment appropriately.
Early Recognition & Referral	Aligns with JNA, unilateral obstruction, recurrent epistaxis	Gatekeeping role	Recognize red-flag features (e.g., unilateral obstruction, recurrent severe epistaxis) requiring urgent ENT referral.
Follow-up of Chronic Nasal Conditions	Aligns with chronic rhinosinusitis	Continuity of care	Plan follow-up strategy for chronic rhinosinusitis and determine failure of medical management.
Community-Level Management of Allergic Rhinitis	Direct alignment	Preventive + Therapeutic	Develop a primary care management plan for allergic rhinitis including pharmacologic and lifestyle advice.
Initial Management of Epistaxis	Direct alignment	Emergency triage integration	Outline initial stabilization measures for epistaxis in a primary care setting before referral.

Clinico-Connect Transdisciplinary Clinical Reasoning Forums (CC-TCRF)
Theme 2

Theme	Week	Topics	Clinical Case Scenario
Theme 2	**Week 2**	**Rhinorrhea, nasal obstruction**	**A young male patient with profuse nose bleed**

“Managing a Young Patient with Profuse Epistaxis and Progressive Nasal Obstruction”

Clinical Scenario

A 16-year-old male presents to the emergency department with sudden onset, profuse right-sided epistaxis for the past 2 hours. The bleeding is bright red, continuous, and not controlled by initial nasal compression and anterior packing at a local clinic.
He reports recurrent spontaneous nosebleeds over the past 6 months, increasing in frequency and severity. He also describes progressive right-sided nasal obstruction, mouth breathing, and occasional hyponasal speech.
On examination, he appears pale and anxious with tachycardia and borderline hypotension. Anterior rhinoscopy reveals blood filling the nasal cavity without a clear anterior bleeding point. Once stabilized, nasal endoscopy shows a smooth, lobulated reddish mass in the nasopharynx extending into the posterior nasal cavity that bleeds on minimal contact.
Imaging reveals a highly vascular mass arising from the posterolateral wall of the nasopharynx with anterior bowing of the posterior maxillary wall. Laboratory findings show anemia.
He is planned for pre-operative embolization followed by surgical excision.

Student Task (Problem-Based Trigger)

Students are asked to:

1. Identify immediate life-threatening concerns.
2. Differentiate simple epistaxis from a structural vascular cause.
3. Interpret imaging findings in relation to symptoms.
4. Develop a comprehensive stabilization and management plan.

5. Anticipate complications (shock, recurrence, intracranial extension).
6. Counsel patient and family regarding prognosis and follow-up.
7. Suggest preventive and early-recognition strategies at community level.

What Makes This RMU-12

- No subject headings
- Knowledge embedded within clinical reasoning
- Patient problem is organizing principle
- Learning mirrors authentic emergency decision-making

Students Integrate (Implicitly)

- Anatomy (nasal cavity, nasopharynx, vascular supply)
- Pathophysiology (vascular tumour behaviour)
- Imaging interpretation (CT/MRI findings)
- Pharmacologic principles (resuscitation, embolization rationale)
- Surgical planning (timing and safety)
- Public health (early referral, awareness of red flags)

None are taught in isolation.

Teaching Format

- Small group facilitated learning
- Emergency stabilization simulation
- Imaging interpretation in clinical context
- Students construct care pathway
- Competency-based assessment (clinical reasoning + decision making)

Figure 23 – Progression in Integration Approaches in Medical Education

Academic Justification Statement

"**This case reflects RMU-12, where learning is structured around an authentic patient emergency rather than disciplinary categories. Biomedical, radiological, surgical, and public health knowledge is integrated seamlessly within professional clinical practice.**

Subject Contribution In CC-TCRF Session -2

Subject / Discipline	Nature of Contribution	Approx. Integration Weight (%)	Rationale
Otorhinolaryngology (ENT)	Core diagnosis, emergency control, surgical planning	**30%**	Organizing discipline; primary clinical reasoning
Radiology	CT/MRI interpretation, vascular mass identification	**15%**	Confirms diagnosis & surgical planning
Anatomy (Applied)	Nasopharynx, pterygopalatine fossa, vascular supply	**10%**	Explains spread & imaging signs
Pathophysiology	Behavior of vascular tumors	**10%**	Explains bleeding tendency
Hematology	Anemia, blood loss assessment	**9%**	Guides transfusion decisions
Pharmacology	Resuscitation drugs, embolization rationale	**8%**	Therapeutic reasoning
Otorhinolaryngology (ENT)	Timing, embolization strategy, operative planning	**10%**	Procedural planning
Public Health	Early referral & awareness of red flags	**8%**	Preventive aspect

Subject-Wise Specific Learning Objectives-2

Subject	Domain	Specific Learning Objectives (Students will be able to…)	Bloom's Level	Integration Role
Otorhinolaryngology (ENT)	Clinical Reasoning	Differentiate anterior epistaxis from posterior/structural causes	Analyze	Core discipline
		Recognize clinical features of juvenile nasopharyngeal angiofibroma	Analyze	
		Formulate stepwise management plan for profuse epistaxis	Evaluate	
		Identify indications for embolization and surgery	Evaluate	
Radiology	Imaging Interpretation	Interpret CT findings of highly vascular nasopharyngeal mass	Analyze	Diagnostic confirmation
		Correlate anterior bowing of posterior maxillary wall with tumor origin	Analyze	
Anatomy (Applied)	Structural Correlation	Describe vascular supply of nasopharynx	Understand	Explains bleeding
		Explain anatomical basis of tumor extension pathways	Analyze	
Pathophysiology	Mechanistic Understanding	Explain why vascular tumors bleed profusely	Understand	Explains severity
		Describe biological behavior of angiofibroma	Understand	
Hematology	Clinical Integration	Interpret laboratory indicators of anemia	Analyze	Guides transfusion
		Outline indications for blood transfusion	Apply	
Pharmacology	Therapeutics	Explain rationale of vasoconstrictors in epistaxis	Understand	Acute control
		Describe principle of pre-operative embolization	Analyze	
Otorhinolaryngology (ENT)	Procedural Planning	Outline surgical principles in vascular tumor excision	Apply	Definitive care
		Identify intraoperative risks	Analyze	
Public Health	Prevention	Identify red flags requiring early ENT referral	Apply	Community awareness
		Propose awareness strategies for recurrent epistaxis	Create	

Theme 3:
Sore throat

Theme	Rationale	General learning objectives (SMART)
Sore throat	Throat-related disorders constitute a major proportion of complaints encountered in primary care, emergency departments, and otolaryngology practice. Conditions such as acute and chronic pharyngitis, tonsillitis, peritonsillar abscess, laryngitis, dysphagia, hoarseness of voice, upper airway obstruction, and malignancies of the pharynx and larynx are common and potentially life-threatening if not promptly recognized and managed. The throat plays a vital role in swallowing, phonation, respiration, and airway protection. Its close anatomical relationship with the larynx, esophagus, cervical spine, and major neurovascular structures makes throat pathology clinically significant. Delay in diagnosis may lead to serious complications such as airway compromise, deep neck space infections, aspiration, and advanced head and neck cancers. Inclusion of throat-related disorders in the ENT theme curriculum ensures that 4th-year MBBS students acquire essential knowledge, clinical examination skills, and professional competencies required for early diagnosis, initial management, and appropriate referral. Emphasis is placed on recognizing red-flag symptoms such as stridor, dysphagia, hoarseness, neck swelling, and constitutional symptoms, enabling future physicians to act decisively in emergency and routine clinical settings.	By the end of the ENT throat-related disorders module, the 4th-year MBBS student will be able to: ● Describe the applied anatomy and physiology of the pharynx and larynx with at least 80% accuracy in written or viva examinations. ● Explain the etiology, pathophysiology, and clinical features of common throat disorders including acute and chronic pharyngitis, tonsillitis, peritonsillar abscess, laryngitis, dysphagia, and hoarseness of voice during structured case-based discussions. ● Elicit a focused history and perform a systematic examination of the throat, including oral cavity and neck examination, correctly in at least 3 out of 4 observed clinical encounters by the end of the clinical rotation. ● Identify signs of upper airway obstruction and initiate appropriate first-line management and urgent referral accurately in OSCE or simulated emergency scenarios. ● Differentiate between benign and malignant causes of dysphagia and hoarseness with a minimum of 75% accuracy in formative or summative assessments. ● Interpret basic investigations relevant to throat disorders, including indirect laryngoscopy findings and imaging studies, at an undergraduate competency level. ● Outline principles of medical and surgical management of common throat conditions, including indications for tonsillectomy and referral for suspected malignancy. ● Recognize red-flag symptoms suggestive of head and neck malignancies (e.g., persistent hoarseness, progressive dysphagia, neck mass, weight loss) and ensure timely referral in clinical scenarios. ● Demonstrate effective communication, professional conduct, and ethical practice while managing patients with throat complaints, as assessed through faculty observation and feedback.

Code	Topic	Learning Objectives At the end of one hour lecture students should be able to	Learning domain	Teaching strategy	Assessment tool
M1-ENT-0025	Acute Chronic tonsillitis Peritonsillar abscess Retropharyngeal abscess Parapharyngeal abscess	• Anatomy of tonsils, retropharyngeal, parapharyngeal spaces • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0026	Chronic tonsillitis	• Anatomy of tonsils, retropharyngeal, parapharyngeal spaces • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	
M1-ENT-0027	Retropharyngeal abscess Parapharyngeal abscess	• Anatomy of tonsils, retropharyngeal, parapharyngeal spaces • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	
M1-ENT-0028	Adenoiditis	• What is adenoiditis • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0029	Diseases of salivary glands	• Anatomy and physiology of salivary glands • Diseases of salivary glands • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0030	Vocal nodules Vocal polyps Reinke’s edema	• What is vocal nodule, vocal polyp, Reinke’s edema • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0031	Ludwigs angina	• What is Ludwigs angina • Causative organism • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE

Community Medicine
Theme 3:

CODE	TOPIC	Contents Outlines (Sub- Topics)	Learning objectives ● After the Session Students Will Be Able to:	Learning domain	Teaching strategy	Assessment tool
M1-CM-0011	**Droplet infections- IV**	• Meningitis • Diphtheria	• Describe public health importance of Meningitis, diphtheria in global and local context. • Describe the epidemiological determinants of Meningitis, diphtheria. • Enlist the modes of transmission and incubation period of Meningitis, diphtheria. • Identify the high-risk individuals to get these diseases. • Diagnose the cases based on signs/symptoms. • Enlist the complications of Meningitis, diphtheria • Recommend prevention and control measures of Meningitis, diphtheria in community.	C2 C2 C1 C2 C3 C2 C3	LGIS	MCQs, SEQs, OSPE and Viva Voce

Small Group Discussions (SGDs)

Demonstration	Contents Outlines (Major Topics & Sub-Topics)	Learning objectives	Learning domain	Teaching strategy	Assessment tool

An exercise of tools of measurement in epidemiology- Measurement of Morbidity	• **Concepts & formulae of Epidemiologic tools used for measurements of diseases in the community.** • **Various types of morbidity rates** • **Incidence Rate Prevalence Rate** • **Relation b/w Incidence and Prevalence**	• **Comprehend statistical tools used for measurement of disease in the population.** • **Calculate incidence rate and prevalence rates in various scenarios** • **Derive relationship in incidence rates and prevalence Rates.** • **Interpret relationship in incidence rates and prevalence Rates.** • **Identify uses of morbidity data**	**C2** **C3** **C3** **C3** **C2**	**SGD**	**MCQs, SEQs, OSPE and Viva Voce**

Thematic Integrated Large Group Session (TILGS) -Aligned to ENT

Theme 3

Community Medicine	Alignment with ENT Theme 3	Type of Integration	Integrated Learning Objective (Students will be able to…)
Measures of Morbidity	Direct alignment with recurrent tonsillitis & pharyngitis burden	Epidemiological integration	Define and calculate morbidity indicators (incidence, prevalence) for recurrent sore throat in school-aged children.
Measures of Morbidity in Chronic Conditions	Aligns with chronic tonsillitis & adenoid hypertrophy	Population health correlation	Interpret morbidity data to assess disease burden of chronic tonsillar disease.
Morbidity & Health Service Utilization	Aligns with school absenteeism due to sore throat	Health systems integration	Analyze impact of recurrent sore throat on school attendance and healthcare utilization.
Epidemiologic Assessment of Infectious Diseases	Aligns with streptococcal tonsillitis	Infectious disease surveillance	Explain epidemiologic patterns of Group A Streptococcal infections in pediatric populations.
Community-Level Disease Burden	Aligns with adenoid hypertrophy and pharyngitis prevalence	Preventive integration	Propose community-level preventive strategies to reduce recurrent throat infections.
Monitoring of Communicable Diseases	Aligns with droplet spread of pharyngitis	Public health control	Describe surveillance and reporting mechanisms for communicable throat infections.

Clinico-Connect Transdisciplinary Clinical Reasoning Forums (CC-TCRF)
Theme 3

Theme	Week	Topic	Clinical Case Scenario
Theme 3	**Week 3**	**Sore throat**	**A child with recurrent sore throat and fever**

“Managing a Child with Recurrent Sore Throat and Fever”

Clinical Scenario

A 9-year-old child is brought to the ENT outpatient clinic by his parents with a history of recurrent episodes of sore throat and fever over the past 2 years. The parents report 5–6 episodes per year, each associated with throat pain, high-grade fever, painful swallowing, and malaise. Most episodes required oral antibiotics and resulted in school absenteeism.
Between acute episodes, the child complains of persistent throat discomfort, halitosis, and occasional difficulty swallowing. There is no history of voice change, breathing difficulty, or weight loss.
On examination, the child is afebrile. Bilateral tonsils are enlarged (Grade III), with irregular surfaces and deep crypts containing cheesy debris. Anterior pillars are congested. Jugulodigastric lymph nodes are palpable, firm, and mildly tender.
Previous throat swabs during acute episodes grew Group A β-hemolytic Streptococcus. Laboratory investigations are largely unremarkable except for mildly raised inflammatory markers.
The child and parents are counseled regarding continued conservative management versus tonsillectomy based on frequency and severity of episodes.

Student Task (Problem-Based Trigger)

Students are asked to:

1. Identify key clinical concerns and impact on quality of life.
2. Differentiate recurrent acute tonsillitis from chronic tonsillitis.
3. Interpret examination findings in relation to symptoms.

4. Develop a comprehensive management plan.
5. Determine indications for surgical intervention.
6. Counsel parents regarding risks, benefits, and prognosis.
7. Suggest preventive strategies at community and school level.

What Makes This RMU-12

- No subject headings
- Knowledge embedded within clinical reasoning
- Organizing principle is the patient problem
- Learning mirrors authentic outpatient decision-making
- Emphasis on competence rather than disciplines

Students Integrate (Implicitly)

- Pharyngeal anatomy (within examination reasoning)
- Microbiological understanding (streptococcal infection)
- Pharmacologic principles (antibiotics, analgesics)
- Surgical decision-making (tonsillectomy criteria)
- Public health (school attendance, infection control)

None are taught separately.

Teaching Format

- Small group facilitated learning
- Case discussion with shared decision-making simulation
- Parent-counselling role play
- Competency-based assessment (clinical reasoning + communication + referral decisions)

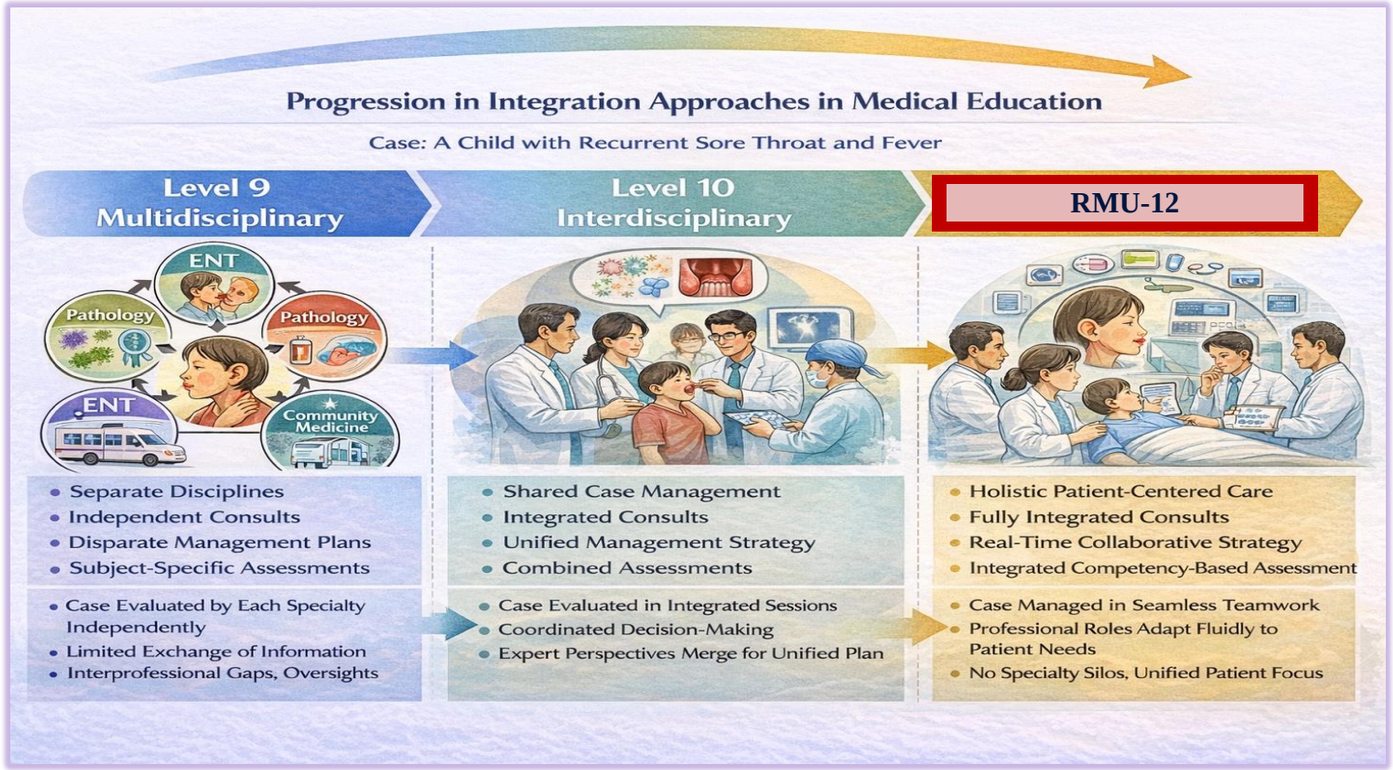


Figure 24 – Progression in Integration Approaches in Medical Education

Academic Justification Statement

"This case reflects RMU-12, where learning is structured around an authentic paediatric outpatient problem rather than disciplinary silos. Biomedical, clinical, surgical, and public health knowledge is integrated seamlessly within professional decision-making."

Subject Contribution In CC-TCRF Session -3

Subject / Discipline	Nature of Contribution	Approx. Integration Weight (%)	Rationale
Otorhinolaryngology (ENT)	Diagnosis, differentiation, surgical decision-making	**40%**	Core organizing clinical discipline
Microbiology	Group A Streptococcus, infection patterns	**12%**	Etiological understanding
Pathophysiology	Recurrent infection mechanisms, lymphoid tissue response	**10%**	Explains chronicity
Pharmacology	Antibiotic selection, resistance considerations	**10%**	Rational therapy
Otorhinolaryngology (ENT)	Indications, risks, post-op care	**8%**	Decision threshold
Public Health	School absenteeism, infection control	**10%**	Community dimension
Anatomy (Applied)	Tonsillar anatomy, lymphatic drainage	**10%**	Supports examination reasoning

Subject-Wise Specific Learning Objectives-3

Subject	Domain	Specific Learning Objectives (Students will be able to…)	Bloom's Level	Integration Role
Otorhinolaryngology (ENT)	Clinical Reasoning	Differentiate recurrent acute tonsillitis from chronic tonsillitis	Analyze	Core discipline
		Identify clinical features suggesting surgical need	Evaluate	
		Grade tonsillar enlargement accurately	Apply	
		Develop comprehensive management plan	Evaluate	
Microbiology	Diagnostic Reasoning	Identify characteristics of Group A β-hemolytic Streptococcus	Understand	Guides therapy
		Interpret throat swab results	Analyze	
		Explain risk of rheumatic fever	Understand	
Immunology / Pathophysiology	Mechanistic Understanding	Explain immune response in recurrent tonsillar infection	Understand	Explains recurrence
		Describe lymphoid hyperplasia mechanism	Understand	
Pharmacology	Therapeutics	Outline appropriate antibiotic regimens	Apply	Management
		Discuss risks of repeated antibiotic exposure	Analyze	
Otorhinolaryngology (ENT)	Procedural Planning	State evidence-based indications for tonsillectomy	Apply	Surgical threshold
		Identify risks and complications of tonsillectomy	Analyze	
Public Health	Community Health	Assess impact on school attendance and social functioning	Analyze	Community relevance
		Suggest infection prevention strategies in school setting	Create	
Anatomy (Applied)	Structural Correlation	Describe tonsillar anatomy relevant to examination	Understand	Supports reasoning
		Explain jugulodigastric lymph node involvement	Understand	

Theme 4:
Hoarseness, dysphagia

Theme	Rationale	General learning objectives (SMART)
Hoarseness Dysphagia	Hoarseness of voice and dysphagia are common yet clinically significant presenting complaints encountered in outpatient clinics, emergency departments, and inpatient settings. These symptoms may arise from a wide spectrum of conditions ranging from benign inflammatory disorders to life-threatening pathologies such as laryngeal carcinoma, hypopharyngeal tumors, neuromuscular diseases, and upper aerodigestive tract obstruction. The larynx and pharynx play a critical role in phonation, swallowing, and airway protection. Disorders affecting these structures can lead to serious complications including aspiration, airway compromise, malnutrition, and delayed diagnosis of malignancy. Persistent hoarseness and progressive dysphagia are key red-flag symptoms that require early recognition and prompt referral. Inclusion of hoarseness and dysphagia-related disorders in the ENT theme curriculum equips 4th-year MBBS students with essential knowledge and clinical skills to evaluate these symptoms systematically, initiate appropriate initial management, and identify cases requiring urgent specialist care. This training enhances patient safety, promotes early cancer detection, and prepares future physicians to manage common yet potentially serious throat-related presentations effectively.	By the end of the ENT hoarseness and dysphagia module, the 4th-year MBBS student will be able to: 1. Describe the applied anatomy and physiology of the larynx, pharynx, and upper esophagus relevant to voice and swallowing with at least 80% accuracy in written or viva examinations. 2. Explain the etiology, pathophysiology, and clinical features of common causes of hoarseness and dysphagia, including inflammatory, neurological, structural, and neoplastic conditions, during structured case-based discussions. 3. Elicit a focused history for hoarseness and dysphagia and perform a relevant clinical examination of the oral cavity, neck, and larynx correctly in at least 3 out of 4 observed clinical encounters by the end of the rotation. 4. Differentiate between benign and malignant causes of persistent hoarseness and dysphagia with a minimum of 75% accuracy in formative or summative assessments. 5. Identify red-flag features such as hoarseness lasting more than three weeks, progressive dysphagia, aspiration, weight loss, or neck mass and initiate timely referral in clinical scenarios. 6. Interpret basic investigations related to hoarseness and dysphagia, including indirect laryngoscopy findings and relevant imaging studies, at an undergraduate competency level. 7. Outline principles of initial medical management and indications for surgical or oncological referral in patients presenting with hoarseness or dysphagia. 8. Recognize airway compromise and demonstrate appropriate first-line emergency measures in simulated or OSCE-based scenarios. 9. Demonstrate effective communication, professional behavior, and ethical practice while counseling patients with voice and swallowing disorders, as assessed through faculty observation and feedback.

Code	Topic	Learning Objectives At the end of one hour lecture students should be able to	Learning domain	Teaching strategy	Assessment tool
M1-ENT-0032	Anatomy and physiology of oral cavity and pharynx	• Anatomy of oral cavity, pharynx • Blood supply of oral cavity, pharynx • Physiology of oral cavity and pharynx • Clinical implications	C1 C2 C3	LGIS	SAQ MCQ OSCE
		•			
M1-ENT-0033	Anatomy and physiology of Larynx, Trachea, bronchi	• Anatomy of larynx, trachea, bronchi • Physiology of larynx, trachea, bronchi • Nerve supply of larynx • Clinical implications	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0034	Acute epiglottitis	• What is acute epiglottitis • Causative organism • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0035	Acute laryngo tracheo bronchitis	• What is laryngotracheobronchitis • Causative organism • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0036	Carcinoma larynx	• Types of carcinoma of larynx • Etiological factors • Clinical features, diagnosis, investigations • Management plans	C1 C2 C3	LGIS	SAQ MCQ OSCE

Community Medicine
Theme 4:

CODE	TOPIC	Contents Outlines (Major Topics & Sub-Topics)	Learning objectives After the Session Students Will Be Able To:	Learning domain	Teaching strategy	Assessment tool
M2-CM-0012	**Analytical studies (case-control studies)**	• Fundamental concept of case- control study designs • Steps of case control studies • Bias & Matching • Odds ratio dies	• Define Case-Control study designs • Describe & apply steps for undertaking a Case-Control study • Comprehend Bias/confounding & matching • Calculate the analytical outcome of case control study & interpret Odds Ratio • Explain uses & limitations of Case-Control studies	C2 C2 C3 C3 C2	LGIS	MCQs, SEQs, OSPE, Viva
M2-CM-0013	**Analytical studies (cohort studies)**	• Fundamental concept of cohort study designs • Steps of cohort studies • Relative risk ratio	• Comprehend cohort study & its types. • Explain steps of cohort studies • Derive & interpret analytical outcomes of cohort studies (Relative risk, Attribute-able risk, Population attribute-able Risk) • Describe differences b/w case-control and cohort studies	C2 C2 C3 C2	LGIS	MCQs, SEQs, OSPE, Viva
M2-CM-0014	**Experimental Epidemiologic study designs**	• Fundamental concept of Experimental Epidemiologic designs • Steps of undertaking a Randomized Controlled Trial (RCT) • Randomization & Blinding	● Define & classify experimental study designs ● Apply general Steps of undertaking a Randomized Controlled Trial (RCT) ● Apply Randomization & Blinding in required situation • Explain Types of randomized control study	C2 C3 C3 C2	LGIS	MCQs, SEQs, OSPE and Viva Voce

		• Types Experimental Epidemiologic study designs				
M2-CM-0015	**Association & Causation**	• Statistical significance & clinical significance • Hill's criterion for judging causality of association	● Describes Types of association ● Explains requirements for disease causation ● Explain difference b/w statistical significance and clinical significance • Apply Hill's criterion for judging causality of association.	C1 C2 C2 C3	LGIS	MCQs, SEQs, Viva Voce and OSPE
M2-CM-0016	**Air & Ventilation**	• Thermal comfort & Air Pollution	• Enlist indices of thermal comfort • Describe the factors responsible for ventilation of air • Define air pollution • Identify sources of air pollution and air pollutants • Demonstrate selection of air sample for analysis • Enumerate the methods to prevent & control of air pollution • Describe standards and types of ventilation	C1 C1 C1 C2 C2 C2 C2	LGIS	MCQs, SEQs, OSPE and Viva Voce

Peer assisted learning (PAL)* IUGRC Contact Session

Topic	- **Contents Outlines (Major Topics & Sub- Topics)**	**Learning objectives** **At end of session Students will be able to …**	**Assessment tool** **LMS**
SESSION 3 Finalization of questionnaire and layout of work plan (Gantt chart) Development & finalizing of; ● Study variables	● Identify relevant and statistically appropriate study variables. ● Develop appropriate data analysis plan, ● Decide use of relevant statistical tests ● Decide sampling method & calculate sample size	● Finalize study variables, data analysis plan, application of relevant statistical tests ● Appreciate relevant sampling and data collection technique ● Finalize data collection tool / questionnaire according to study objectives and variables and	1. MCQ in each block exam 2. Viva exam at the end of the session

● data analysis plan ● use of relevant statistical measures ● data collection tool development ● addressing ethical aspects of SGRP and preparing Gantt chart	● Develop data collection tool & decide data collection technique ● Apply principles of research ethics in SGRP specifically informed consent, confidentiality of information e	in accordance to information required from target respondents ● Develop Gantt chart for study timeline ● Develop informed consent form for the SGRP study	

Thematic Integrated Large Group Session (TILGS) -Aligned to ENT

Theme 4

Community Medicine	Alignment with ENT Theme 4	Type of Integration	Integrated Learning Objective (Students will be able to…)
Measures of Morbidity (Incidence & Prevalence)	Acute & chronic tonsillitis burden	Epidemiological integration	Calculate and interpret incidence and prevalence of tonsillitis and pharyngitis in community populations.
Morbidity in Communicable Diseases	Streptococcal pharyngitis & abscess formation	Infectious disease surveillance	Analyze trends in communicable throat infections and their complications.
Morbidity Indicators in Chronic Conditions	Chronic tonsillitis & oral premalignant lesions	Population disease burden	Assess population burden of chronic throat and oral cavity disorders.
Disease Burden & Health Service Utilization	Recurrent sore throat & abscess requiring admission	Health systems integration	Evaluate impact of recurrent pharyngeal infections on healthcare utilization.
Morbidity in Neoplastic Conditions	Oral cavity tumors	Cancer epidemiology linkage	Interpret basic morbidity patterns of oral cancers in high-risk populations.
Prevention Strategies	Prevention of communicable throat infections & tobacco-related oral cancer	Primary & secondary prevention	Propose preventive strategies to reduce incidence of throat infections and oral malignancy at community level.

Clinico Connect Transdisciplinary Clinical Reasoning Forums (CC-TCRF)
Theme 4

Theme	Week	Topics	Clinical Case Scenario
Theme 4	**Week 4**	**Hoarseness, dysphagia**	**An old age man with hoarseness of voice and difficulty in breathing**

"Managing an Elderly Patient with Progressive Hoarseness and Airway Compromise"

Clinical Scenario

A 55-year-old man presents to the ENT outpatient clinic with progressive hoarseness of voice for 4 months. Initially intermittent, the hoarseness has become persistent. Over the last 6 weeks, he has developed difficulty swallowing, initially solids and later liquids, associated with painful swallowing.
He has a 30-year history of cigarette smoking and regular alcohol consumption. He reports unintentional weight loss, reduced appetite, and occasional referred ear pain.
On examination, he appears cachectic. A firm, non-tender lymph node is palpable in the left upper deep cervical region. Indirect laryngoscopy reveals an irregular growth involving the left vocal cord with restricted mobility and narrowing of the glottic airway. Imaging confirms a laryngeal mass with ipsilateral cervical lymphadenopathy. Biopsy establishes squamous cell carcinoma of the larynx.
He is referred to a multidisciplinary tumor board for definitive management.

Student Task (Problem-Based Trigger)

Students are asked to:

1. Identify red-flag features in hoarseness.
2. Correlate symptoms with anatomical involvement.
3. Interpret imaging findings in clinical context.
4. Develop a comprehensive management plan.
5. Discuss airway safety and urgency of referral.
6. Counsel patient regarding prognosis and lifestyle modification.
7. Suggest preventive strategies at community level (tobacco cessation).

What Makes This RMU-12

- No disciplinary headings

- Knowledge embedded within clinical reasoning
- Organizing principle is the patient problem
- Emphasis on professional decision-making
- Competency-based focus

Students Integrate (Implicitly)

- Laryngeal anatomy and nerve supply
- Pathophysiology of malignancy
- Imaging interpretation (CT findings)
- Pharmacologic aspects (chemotherapy/radiotherapy)
- Surgical considerations
- Communication and breaking bad news
- Public health (tobacco control, early screening)

None are taught separately.

Teaching Format

- Small-group facilitated discussion
- Airway emergency scenario
- Counselling role-play
- Competency-based assessment (clinical reasoning + communication + referral decisions)

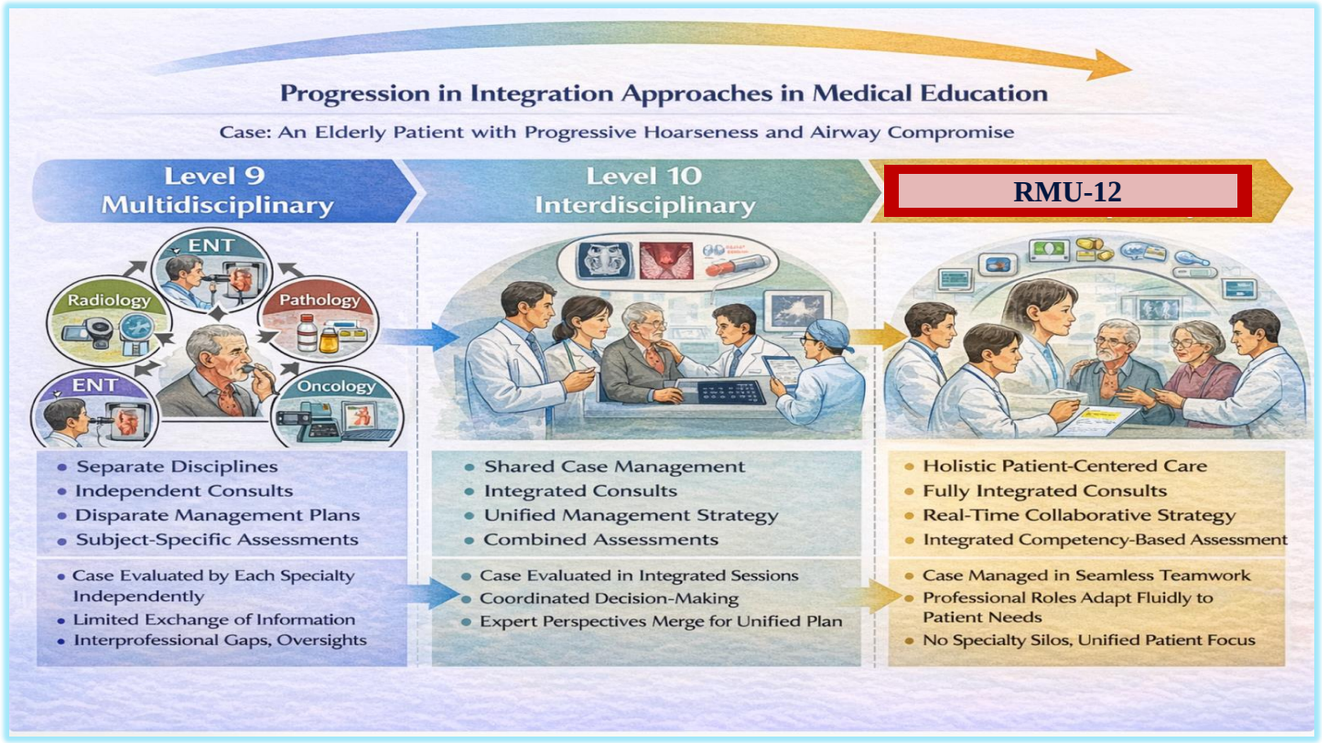


Figure 25 – Progression in Integration Approaches in Medical Education

Academic Justification Statement

"This case reflects RMU-12, where learning is structured around an authentic oncologic patient problem rather than disciplinary silos. Biomedical, radiologic, surgical, pharmacologic, and public health knowledge is integrated seamlessly within professional clinical practice."

Subject Contribution In CC-TCRF Session -4

Subject / Discipline	Nature of Contribution	Approx. Integration Weight (%)	Rationale
Otorhinolaryngology (ENT)	Primary diagnosis, airway evaluation, management pathway	**40%**	Core organizing discipline
Radiology	CT interpretation, tumor extent evaluation	**12%**	Staging and surgical planning
Anatomy (Applied)	Vocal cord anatomy, nerve supply, lymphatic drainage	**10%**	Symptom correlation
Pathophysiology (Malignancy)	Tumor growth, metastasis mechanisms	**8%**	Explains progression
Otorhinolaryngology (ENT)	Airway management, laryngectomy considerations	**15%**	Definitive management
Pharmacology (Oncology)	Chemotherapy, radiotherapy principles	**6%**	Adjunct treatment reasoning
Otorhinolaryngology (ENT)	Airway compromise assessment	**6%**	Urgent safety dimension
Public Health	Tobacco cessation, cancer prevention	**3%**	Preventive strategy

Subject-Wise Specific Learning Objectives-4

Subject	Domain	Specific Learning Objectives (Students will be able to…)	Bloom's Level	Integration Role
Otorhinolaryngology (ENT)	Clinical Reasoning	Identify red-flag features in hoarseness lasting >2 weeks	Analyze	Core discipline
		Correlate referred otalgia with laryngeal pathology	Analyze	
		Perform focused neck examination for cervical nodes	Apply	
		Develop stepwise management plan	Evaluate	
		Recognize airway compromise requiring urgent intervention	Evaluate	
		Explain tumor board decision-making	Understand	
Radiology	Imaging Interpretation	Interpret CT findings of laryngeal mass	Analyze	Staging confirmation
		Correlate imaging with vocal cord mobility restriction	Analyze	
Anatomy (Applied)	Structural Correlation	Describe vocal cord anatomy and nerve supply	Understand	Explains symptoms
		Explain lymphatic drainage pathways of larynx	Understand	
Pathophysiology (Malignancy)	Mechanistic Understanding	Explain progression from dysplasia to carcinoma	Understand	Explains risk
		Describe mechanisms of metastasis to cervical nodes	Understand	
Otorhinolaryngology (ENT)	Procedural Planning	Outline principles of partial vs total laryngectomy	Apply	Definitive care
		Identify surgical risks and airway considerations	Analyze	
Pharmacology (Oncology)	Therapeutics	Explain principles of chemoradiotherapy	Understand	Adjunct therapy
		Discuss side effects of radiotherapy	Analyze	
Otorhinolaryngology (ENT)	Acute Safety	Identify signs of impending airway obstruction	Apply	Urgent care
		Outline initial airway stabilization steps	Apply	
Public Health	Prevention	Explain relationship between tobacco and laryngeal cancer	Understand	Community awareness
		Propose tobacco cessation strategies	Create	

Theme 5:
Neck masses

Theme	Rationale	General learning objectives (SMART)
Neck Masses	Neck masses, cysts, and swellings are common clinical presentations encountered in outpatient clinics, emergency departments, and inpatient settings. These conditions may represent a wide spectrum of pathologies ranging from benign congenital lesions and inflammatory swellings to serious malignant diseases of the head and neck region. Early and accurate evaluation of neck swellings is crucial, as delayed diagnosis may lead to advanced-stage malignancy, airway compromise, or spread of infection to deep neck spaces. The neck contains vital anatomical structures including major blood vessels, cranial nerves, lymphatic chains, thyroid and salivary glands, and the aerodigestive tract. Disorders affecting these structures require a systematic and anatomical approach to diagnosis. In adults, a neck mass should be considered malignant until proven otherwise, making early recognition and referral a critical responsibility of the primary care physician. Inclusion of neck mass–related disorders in the ENT theme curriculum enables 4th-year MBBS students to develop competencies in anatomical localization, clinical examination, differential diagnosis, and initial management. This training prepares future medical graduates to recognize red-flag features, initiate appropriate investigations, and ensure timely referral, thereby improving patient outcomes and safety.	By the end of the ENT neck masses, cysts, and swellings module, the 4th-year MBBS student will be able to: 1. Describe the applied anatomy of the neck, including lymph node levels and major structures, with at least 80% accuracy in written or viva examinations. 2. Classify neck masses based on age, anatomical location, and etiology (congenital, inflammatory, neoplastic) during structured assessments and case discussions. 3. Explain the etiology, pathophysiology, and clinical features of common neck swellings, including lymphadenitis, thyroid swellings, salivary gland swellings, branchial cysts, thyroglossal cysts, and metastatic lymph nodes. 4. Elicit a focused history and perform a systematic examination of the neck, including lymph node examination, correctly in at least 3 out of 4 observed clinical encounters by the end of the clinical rotation. 5. Differentiate between benign and malignant neck masses with a minimum of 75% accuracy in formative or summative assessments. 6. Identify red-flag features such as rapidly enlarging mass, hard or fixed nodes, associated weight loss, hoarseness, or dysphagia and initiate timely referral in clinical scenarios. 7. Interpret basic investigations relevant to neck swellings, including ultrasound neck, FNAC reports, and basic imaging findings, at an undergraduate competency level. 8. Outline principles of initial medical management and indications for surgical or oncological referral for patients with neck masses and cysts. 9. Demonstrate effective communication, professional conduct, and ethical practice while counseling patients with neck swellings, as assessed through faculty observation and feedback.

Code	Topic	Learning objectives At the end of one hour lecture students should be able to	Learning domain	Teaching strategy	Assessment tool
M1-ENT-0037	Anatomy and physiology of neck and thyroid gland Level of neck lymph nodes	• Anatomy of neck, thyroid gland • Blood supply of neck, thyroid gland • Physiology of thyroid gland • Clinical implications	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0038	Branchial cyst	• Anatomy of branchial cyst • Clinical implications • Investigations • Treatment	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0039	Branchial fistula	• Anatomy of branchial cyst • Clinical implications • Investigations • Treatment	C1 C2 C3	LGIS	SAQ MCQ OSCE
M1-ENT-0040	Cervical lymphadenopathy	• Levels of neck nodes • Differential diagnosis • Investigations • Treatment	C1 C2 C3	LGIS	SAQ MCQ OSCE

Community Medicine
Theme 5:

CODE	TOPIC	Contents Outlines (Sub- Topics)	Learning objectives ● After the Session Students Will Be Able to:	Learning domain	Teaching strategy	Assessment tool
M2-CM-0017	Sampling-I	Non probability sampling	● Define and comprehend the definition & rationale of sampling. ● Understand the Concept of non-probability sampling technique ● Enlist the types of non-probability sampling ● Appraise different scenarios to apply different non -probability technique	C2 C3 C1 C3	LGIS	MCQs, SEQs, Viva Voce and OSPE
M2-CM-0018	Sampling-II	Probability sampling	● Discuss significance of sampling frame ● Enlist the types of probability sampling. ● Appraise different real life scenarios to apply different probability technique ● Consider ethical issues in sampling for health research	C2 C1 C3 C3	LGIS	MCQs, SEQs, Viva Voce and OSPE
M2-CM-0019	Environment and health (Air Purification Global Warming)	• Methods of air purification • Global Warming	• Enlist natural and Artificial methods of air purification • Describe Greenhouse effect and greenhouse gases • Identify greenhouse gases source • Define ozone hole and its importance • Explain link between global warming and climate change	C1 C1 C1 C2 C3	LGIS	MCQs, SEQs, OSPE and Viva Voce

Thematic Integrated Large Group Session (TILGS) -Aligned to ENT

Theme 5

Community Medicine	Alignment with ENT Theme 5	Type of Integration	Integrated Learning Objective (Students will be able to…)
Probability & Non-Probability Sampling	Aligns with epidemiologic study of neck masses & malignancy patterns	Research-methodology integration	Differentiate probability and non-probability sampling methods in studies assessing prevalence of cervical lymphadenopathy or head & neck cancers.
Association & Causation	Strong alignment with risk factors for neck masses (TB, malignancy, smoking)	Analytical epidemiology	Explain criteria for causation and apply them to risk factors associated with cervical lymphadenopathy and head & neck tumors.
Air and Ventilation	Aligns with airway compromise in Ludwig's angina & neck space infections	Environmental health integration	Describe the impact of ventilation and air quality on transmission of upper respiratory and neck infections.
Measurement of Mortality	Aligns with mortality risk in deep neck space infections & malignancy	Outcome measurement integration	Interpret mortality indicators (e.g., case fatality rate) in severe neck infections and head & neck cancers.
Mortality in Communicable Diseases	Aligns with pediatric infectious neck swelling (e.g., diphtheria-like cases)	Public health surveillance	Analyze mortality trends in communicable infections affecting the upper airway.
Epidemiologic Study Design (Implicit via sampling & causation)	Aligns with risk factor analysis of thyroid swelling & malignancy	Research application	Apply basic epidemiologic principles to design a study investigating risk factors for neck masses.

Clinico Connect Transdisciplinary Clinical Reasoning Forums (CC-TCRF)
Theme 5

Theme	Week	Topic	Clinical Case Scenario
Theme 5	**Week 5**	**Neck masses**	**A child with fever, neck swelling, difficulty in breathing**

"Managing a Child with Fever, Neck Swelling, and Impending Airway Obstruction"

Clinical Scenario

A 6-year-old child is brought to the emergency department with fever, sore throat, and progressive difficulty in swallowing for 3 days. Parents report lethargy, reduced oral intake, and increasing neck swelling. The child is partially immunized, having missed booster doses.
On examination, the child appears toxic and ill. Vital signs show low-grade fever and mild tachycardia. Oropharyngeal examination reveals a thick, grayish-white adherent membrane over the tonsils and posterior pharyngeal wall. Attempts to remove it cause bleeding. The neck appears swollen with bilateral cervical lymphadenopathy and soft tissue edema, producing a "bull neck" appearance. Hoarseness and mild stridor are present, suggesting laryngeal involvement.
Laboratory investigations reveal leukocytosis. Culture confirms Corynebacterium diphtheriae. Early ECG changes suggest possible myocardial involvement.
The child is immediately started on diphtheria antitoxin, intravenous antibiotics, strict airway monitoring, and isolation precautions.

Student Task (Problem-Based Trigger)

Students are asked to:

1. Identify life-threatening features and prioritize airway safety.
2. Differentiate infectious neck swelling from other causes.

3. Correlate systemic complications with toxin-mediated disease.
4. Develop an emergency management plan.
5. Anticipate complications (myocarditis, neuropathy, airway obstruction).
6. Counsel parents regarding immunization and prognosis.
7. Propose community-level prevention strategies.

What Makes This RMU-12?

- No subject silos
- Knowledge embedded within emergency reasoning
- Organizing principle is the patient problem
- Learning mirrors authentic paediatric emergency care
- Competency-driven focus

Students Integrate (Implicitly)

- Pharyngeal and airway anatomy
- Microbial pathogenesis and toxin effects
- Pharmacologic principles (antitoxin, antibiotics)
- Airway management strategy
- Cardiology
- Communication and parental counseling
- Public health (immunization programs, outbreak control)

None are taught separately.

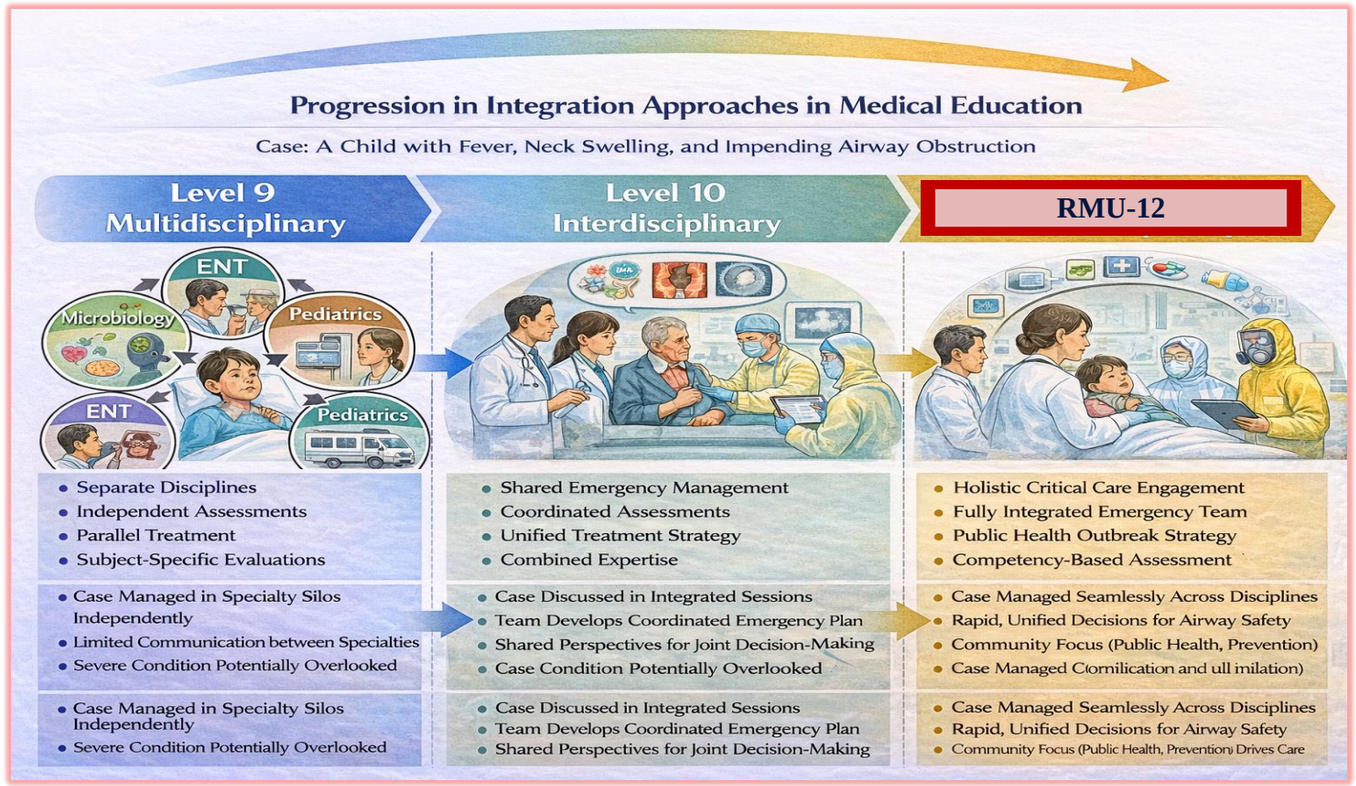


Figure 26 – Progression in Integration Approaches in Medical Education

Teaching Format

- Small-group emergency simulation
- Airway management drill
- Isolation protocol discussion
- Public health outbreak planning exercise
- Competency-based assessment (clinical reasoning + emergency prioritization + counselling)

Academic Justification Statement

"This case reflects RMU-12 where learning is structured around an authentic pediatric infectious emergency rather than disciplinary categories. Clinical, microbiological, pharmacologic, and public health knowledge is integrated seamlessly within professional decision-making."

Subject Contribution In Clinico Connect Transdisciplinary Clinical Reasoning Forums (CC-TCRF)

Subject / Discipline	Nature of Contribution	Approx. Integration Weight (%)	Rationale
Otorhinolaryngology (ENT)	Airway assessment, neck examination, emergency planning	**40%**	Core clinical stabilizing discipline
Microbiology	Corynebacterium diphtheriae, toxin production	**14%**	Etiological driver
Pathophysiology	Toxin-mediated systemic effects	**12%**	Explains complications
Pharmacology	Antitoxin rationale, antibiotic therapy	**15%**	Definitive treatment
Cardiology	Myocarditis monitoring & ECG interpretation	**10%**	Systemic complication
Public Health	Immunization programs, outbreak control	**7%**	Prevention dimension
Anatomy (Applied)	Pharyngeal & laryngeal anatomy	**2%**	Supports reasoning

Subject-Wise Specific Learning Objectives-5

Subject	Domain	Specific Learning Objectives (Students will be able to…)	Bloom's Level	Integration Role
Otorhinolaryngology (ENT)	Clinical Reasoning	Identify "bull neck" appearance and airway compromise signs	Analyze	Core stabilizing role
		Perform focused neck and oropharyngeal examination safely	Apply	
		Develop airway monitoring strategy	Evaluate	
Microbiology	Etiology	Describe characteristics of Corynebacterium diphtheriae	Understand	Disease causation
		Explain toxin production mechanism	Understand	
		Interpret culture confirmation	Analyze	
Pathophysiology	Mechanistic Understanding	Explain mechanism of pseudomembrane formation	Understand	Explains airway risk
		Correlate toxin spread with myocarditis & neuropathy	Analyze	
Pharmacology	Therapeutics	Explain mechanism of diphtheria antitoxin	Understand	Definitive therapy
		Outline antibiotic regimen and duration	Apply	
		Discuss importance of early antitoxin administration	Analyze	
Cardiology	Systemic Monitoring	Identify ECG changes suggestive of myocarditis	Analyze	Complication detection
		Outline monitoring protocol	Apply	
Public Health	Prevention	Explain role of immunization in diphtheria prevention	Understand	Community relevance
		Propose outbreak control measures	Create	
		Counsel regarding booster schedules	Apply	

Self-Directed Learning (SDL) Otorhinolaryngology Module 1

WEEK	THEME	Topics Of SDL	Learning Objectives	Learning resources
WEEK 1	Otalgia, Otorrhoea, Dizziness, Hearing loss	Anatomy / Radiology of Temporal bone and Mastoid,Xray Mastoid,CT Scan Temporal bone,MRI Temporal bone	• Radiological investigations done for ear and mastoid • X ray mastoid oblique view, CT scan temporal bone (axial, coronal views) • Indications of radiological investigations • Findings on radiological investigations	• Diseases of Ear, Nose and Throat & Head and Neck Surgery, 8th edition PL Dhingra
WEEK 2	Rhinorrhoea, Nasal obstruction	Anatomy and Physiology of nose and PNS	• Discuss basic anatomy and Physiology • Development of PNS • Functions of nose & PNS	• Diseases of Ear, Nose and Throat & Head and Neck Surgery, 8th edition PL Dhingra
WEEK 3	Sore throat	Adenoiditis Salivary gland diseases	• Definition • Etiology • Investigations • Treatment options • Surgical options	• Diseases of Ear, Nose and Throat & Head and Neck Surgery, 8th edition PL Dhingra

Self-Directed Learning (SDL) Otorhinolaryngology Module 2

WEEK	THEME	Topics Of SDL	Learning Objectives	Learning resources
WEEK4.	Hoarseness, Dysphagia	Dysphagia Vocal cord paralysis Vocal nodules Radiology of neck and aerodigestive tract	• Discuss Clinical features • Describe Investigations • Discuss Management options	• Ear, Nose and Throat, Self-Assessment and Self Evaluation Manual, 8th Edition, PL Dhingra
WEEK 5.	Neck masses	Anatomy & Physiology of Neck Cystic Hygroma Carotid body tumor	• Discuss Anatomy of Neck • Discuss Clinical features • Describe Investigations • Discuss Management options	• Diseases of Ear, Nose and Throat & Head and Neck Surgery, 8th edition PL Dhingra

Community Medicine Self Directed Learning (SDL)

SDL Theme 1:

Topic	Contents Outlines (Major Topics & Sub- Topics)	Learning objectives At end of session Students will be able to …	Assessment tool LMS	Learning resource
Basic Concepts of Infectious Disease Epidemiology	• Basic definitions of epidemiological significance	● Definition of epidemiology ● Define important terms related to infectious disease epidemiology. ● Understand Dynamics of disease transmission (chain of infection) ● Appraise different Modes of transmission ● Differentiate between epidemic, endemic and pandemic ● Explain the concept of incubation period and its importance.	MCQS	K Park Ed. 27th

SDL

Theme 2:

Topic	Contents Outlines (Major Topics & Sub- Topics)	Learning objectives	Assessment tool LMS	Learning resource
Droplet infections	• COVID 19	• Describe public health importance of COVID in global and local context. • Describe the epidemiology of COVID • Enlist the modes of transmission and incubation period of COVID • Identify the high-risk individuals • Diagnose the cases based on signs and symptoms. • Enlist the complications of COVID • Recommend prevention and control measures of COVID in community.	MCQS	K. Park Ed. 27th page177

SDL

Theme 3:

Topic	Contents Outlines (Major Topics & Sub- Topics)	Learning objectives	Assessment tool LMS	Learning resource
Droplet infections	• Influenza	• Describe public health importance of influenza in global and local context. • Describe the epidemiology of influenza • Enlist the modes of transmission and incubation period of influenza • Identify the high-risk individuals • Diagnose the cases based on signs and symptoms. • Enlist the complications of influenza • Recommend prevention and control measures of influenza in community. • Differentiate between antigenic drift and antigenic shift with reference to Influenza	MCQs	K. Park Ed. 27th Page 163

SDL
Theme 4:

Topic	Contents Outlines (Major Topics & Sub- Topics)	Learning objectives At end of session Students will be able to …	Assessment tool LMS	Learning resource
Epidemiologic Investigation	• Disease outbreak & epidemic – review (epidemic, endemic & pandemic) • Types of epidemics • Steps of an epidemiologic investigation	• Describes public approach to deal with disease outbreaks & epidemics. • Classify types and levels disease epidemics or outbreaks. • Explain steps of investigating a disease outbreak situation.	MCQs	K. Park Ed. 27th Page no. 146

SDL
Theme 5:

Topic	Contents Outlines (Major Topics & Sub- Topics)	Learning objectives At end of session Students will be able to …	Assessment tool LMS	Learning resource
Exercise on Epidemiologic Investigation	• Covid-19 a case study	• Delineates epidemiologic investigation levels involved in Covid-19	MCQs	K. Park Ed. 27th Page no. 146

Section – IV Symptom Based Integrated Clinical Clerkship

Introduction

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

The **Otorhinolaryngology (ENT) clerkship** provides an integrated clinical learning experience designed to bridge foundational biomedical sciences with real-world clinical practice. The clerkship focuses on developing students' competencies in recognizing, evaluating, and managing common disorders of the ear, nose, throat, and head & neck region**.** Through supervised clinical exposure and structured learning activities, students develop clinical reasoning, diagnostic skills, communication abilities, and patient-centered management approaches.

The clerkship spans six weeks of mandatory clinical rotation across the three affiliated teaching hospitals of Rawalpindi Medical University: Holy Family Hospital (HFH), Benazir Bhutto Hospital (BBH), and Rawalpindi Teaching Hospital (RTH)**.** Clinical exposure includes a minimum **of** 84 hours of supervised training, where students attend ENT outpatient departments, wards, and procedure areas for approximately three and a half hours daily, four days per week**.**

To ensure progressive learning and exposure to the spectrum of ENT conditions, the clerkship is organized into six weekly clinical themes**:**

Week 1 – Ear Disorders (HFH)
Students learn the clinical evaluation and management of common ear conditions such **as** hearing loss, otitis media, chronic suppurative otitis media, vertigo, tinnitus, and impacted cerumen**.** Emphasis is placed on ear examination techniques, interpretation of audiological investigations, and preventive care.

Week 2 – Nose and Paranasal Sinus Disorders (HFH)
This week focuses on conditions causing nasal obstruction, epistaxis, allergic rhinitis, and sinusitis**.** Students learn anterior rhinoscopy, recognition of nasal pathologies, and principles of medical and surgical management.

Week 3 – Throat Disorders (BBH)
Students explore diseases of the pharynx and tonsils, including tonsillitis, adenoid hypertrophy, pharyngitis, and infections of the upper aerodigestive tract**,** emphasizing clinical examination and appropriate management strategies.

Week 4 – Hoarseness and Dysphagia (BBH)
This theme focuses on disorders affecting voice and swallowing, including laryngeal diseases, vocal cord pathology, reflux-related disorders, and neurological causes of dysphagia. Students learn clinical assessment of the larynx and recognition of red-flag symptoms requiring urgent referral.

Week 5 – Neck Masses (RTH)
Students are introduced to the systematic evaluation of neck swellings, including lymphadenopathy, thyroid disorders, congenital neck masses, and head & neck tumors**.** Emphasis is placed on clinical examination, differential diagnosis, and appropriate investigation pathways.

Week 6 – Surgical Aspects of ENT (RTH)
The final week focuses on surgical principles and operative procedures in ENT, including observation of common surgeries such as tonsillectomy, septoplasty, mastoid surgery, and endoscopic sinus surgery**.** Students gain insight into preoperative assessment, intraoperative techniques, and postoperative care**.**

The clerkship employs active and experiential learning strategies, including bedside teaching, supervised clinical examination, outpatient clinic participation, ward rounds, observation of diagnostic procedures (endoscopy and audiology), and exposure to ENT surgical procedures**.** Learning is further reinforced through small-group discussions, case-based learning, guided pre-reading, simulated patient communication exercises, and structured clinical demonstrations**.**

Assessment within the clerkship integrates formative and summative approaches to ensure continuous learning and competency development. These include ward-based assessments, logbook documentation of clinical exposure and procedural skills, MCQs and SAQs to assess conceptual understanding, OSCE stations to evaluate examination and communication skills, faculty feedback sessions, structured case presentations, and reflective portfolio assessments**.**

Through this structured thematic approach and multi-hospital clinical exposure, the ENT clerkship supports the RMU-12 vision of integrated, competency-based medical education**,** preparing students to competently identify and manage common ENT conditions while fostering professionalism, teamwork, and lifelong learning**.**

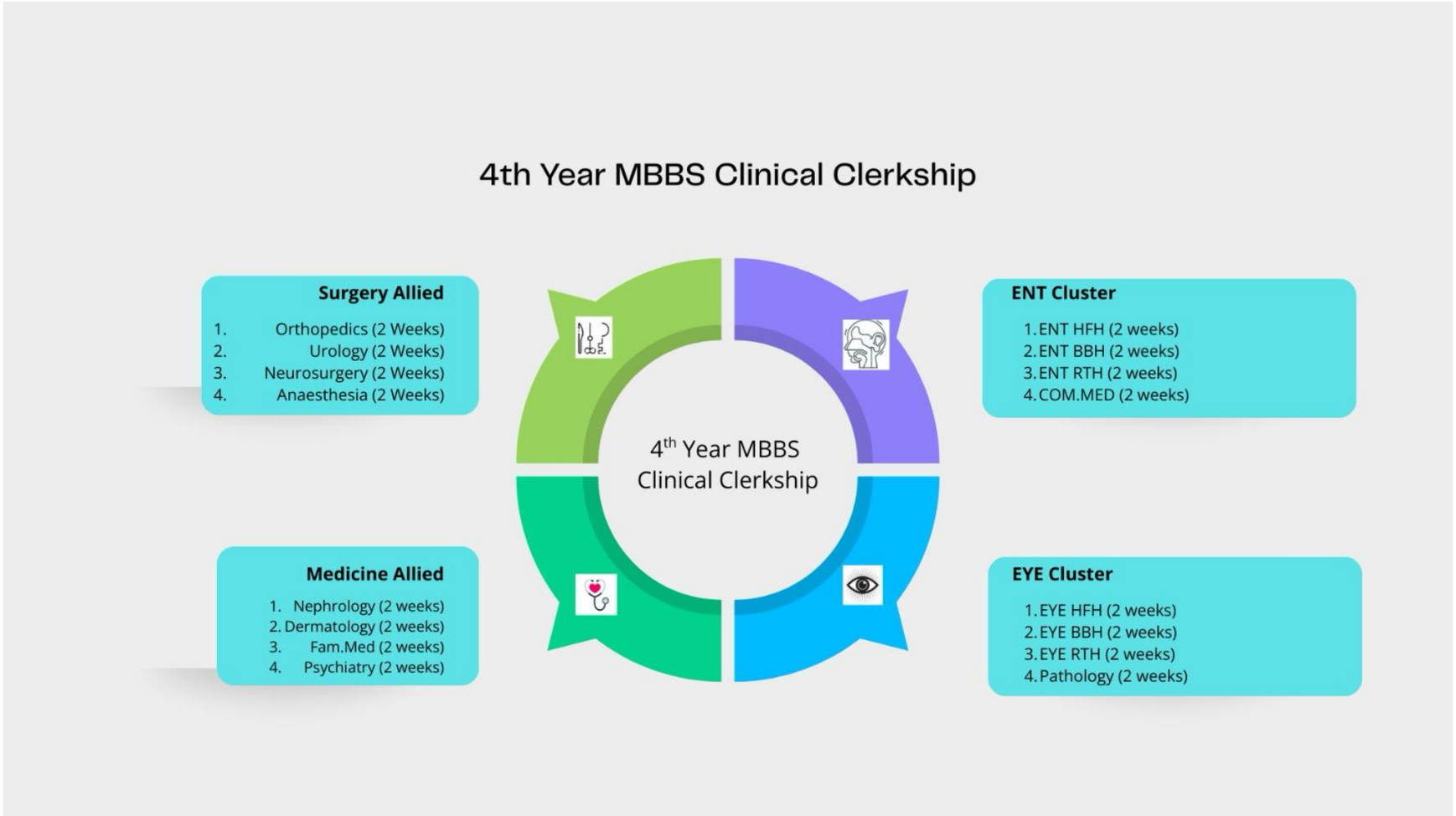


Figure 25 – Clinical Symptom Based Integrated Clinical Clerkship (CSB-ICC) ENT

Transdisciplinary Clinical Connect Session (TCCS)

Rationale Of The ENT Clinical Clerkship Program	General Learning Objectives

The 4th Year MBBS ENT Clinical Clerkship is structured around five high-frequency presenting complaints Otalgia/Otorrhea/Hearing loss/Dizziness, Rhinorrhoea/Nasal obstruction, Sore throat, Hoarseness/Dysphagia, and Neck masses, rather than traditional anatomical subdivisions. This thematic, symptom-oriented design reflects authentic clinical practice, where patients present with complaints rather than organ-based categories. This model promotes development of clinical reasoning by encouraging students to construct illness scripts based on presenting symptoms, differentiate common from serious conditions, and identify red-flag features requiring urgent referral. The structure supports hypothesis-driven diagnostic thinking rather than rote memorization. The clerkship operates within a workplace-based, competency-driven framework. Students progressively advance from foundational examination skills to integrated clinical decision-making across three hospital settings. The spiral progression ensures increasing complexity, contextual exposure, and refinement of skills in real patient environments.
 	
Educationally, the program aligns with:
 	
• **Harden's Integration Ladder (Levels 9–11)** by integrating basic sciences with clinical disciplines and encouraging interdisciplinary reasoning.
• **Miller's Pyramid**, progressing from "Knows How" to "Shows How" and approaching "Does" under supervision.
• **Competency-Based Medical Education (CBME)** through observable, measurable clinical competencies.
	ENT Integrated Clinical Clerkship (4th Year MBBS)
	
	By the end of the 6-week clerkship, students will be able to:
	
	Clinical Assessment Competencies
	
	1. Take a focused, symptom-oriented ENT history for patients presenting with:
	  ○ Ear pain, discharge, hearing loss, vertigo
	  ○ Nasal obstruction and rhinorrhoea
	  ○ Sore throat
	  ○ Hoarseness and dysphagia
	  ○ Neck swelling
	2. Perform systematic ENT examination including:
	  ○ Otoscopic examination
	  ○ Tuning fork tests
	  ○ Anterior rhinoscopy
	  ○ Throat examination
	  ○ Indirect laryngoscopy observation
	  ○ Cervical lymph node examination
	  ○ Thyroid and parotid assessment
	
	Clinical Reasoning Competencies
	
	3. Generate appropriate differential diagnoses based on presenting complaints.
	4. Differentiate common benign conditions from red-flag or malignant presentations.
	5. Recognize emergencies including:
	  ○ Sudden sensorineural hearing loss
	  ○ Peritonsillar abscess

• **Patient-centered care principles**, emphasizing communication, professionalism, and ethical responsibility. Furthermore, the selected themes reflect local disease burden and public health relevance, including tuberculosis-related lymphadenopathy, allergic rhinitis prevalence, diabetic complications such as malignant otitis externa, and tobacco-related head and neck malignancies. The clerkship therefore ensures contextual relevance, integration, progressive skill acquisition, and safe clinical practice readiness.	○ Airway compromise ○ Epistaxis requiring urgent management 6. Plan initial investigations and interpret basic findings (audiogram, X-ray PNS, FNAC basics). **Management & Safety Competencies** 7. Outline initial management strategies for common ENT conditions. 8. Identify cases requiring urgent referral to higher-level care. 9. Demonstrate understanding of antibiotic stewardship and rational prescribing. 10. Participate in ward rounds and observe minor procedures safely. **Communication & Professionalism** 11. Counsel patients regarding: • Disease condition and prognosis • Treatment compliance • Warning signs • Preventive strategies 12. Communicate sensitively in cases of suspected malignancy. 13. Maintain patient confidentiality and professional conduct in clinical settings. **Integration & Systems-Based Competencies** 14. Integrate basic sciences (anatomy, physiology, pathology, microbiology, pharmacology) with clinical findings. 15. Collaborate effectively within multidisciplinary teams including radiology, pathology, oncology, pediatrics, medicine, and anesthesia.

Transdisciplinary Clinical Connect Session (TCCS)

Theme	Core Competency Emphasis
Theme 1 – Otalgia, Otorrhea, Dizziness, Hearing Loss	Examination skills + red flags
Theme 2 – Rhinorrhoea, Nasal obstruction	Differential diagnosis + emergency management
Theme 3 – Sore throat	Infection vs surgical decision-making
Theme 4 – Hoarseness, dysphagia	Malignancy suspicion + airway awareness
Theme 5 – Neck mass	Diagnostic reasoning + systemic disease integration
Theme 6 – Surgical aspects of ENT	Ear suction cleaning Myringotomy Mastoidectomy Septoplasty Tonsillectomy Adenoidectomy Direct Laryngoscopy Rigid Bronchoscopy Rigid Esophagoscopy

Duration:	6 Weeks (24 Days)

	• 21 Clinical Days • 3 Assessment Days **Model:** Symptom-Based Integrated Clinical Clerkship **Integration Level:** Harden Level 9–11

Theme - 1

Otalgia, Otorrhea, Hearing Loss, Dizziness

Day	Clinical Case	Core Teaching Points	Harden Integration Level	Multidisciplinary (Level 11)	Skills	Attitude
Day 1	25-year-old swimmer with severe otalgia & discharge	Acute otitis externa, AOM with perforation, malignant otitis externa, external vs middle ear differentiation, red flags	Steps 1–4: Applied anatomy & microbiology; Steps 7–9: Clinical correlation; Step 10: Integrated otoscopy	ENT, Pathology,	History, Otoscopy	Hygiene counselling, danger sign awareness
Day 2	Elderly patient with gradual hearing loss	Conductive vs SNHL, presbycusis, sudden SNHL emergency	Level 9–10 (Clinical integration & reasoning)	ENT, Audiology	Tuning fork tests, PTA interpretation	Empathy in elderly care
Day 3	Patient with vertigo	BPPV, Meniere's disease, peripheral vs central differentiation	Level 9–11 (ENT + Neurology integration)	ENT, Medicine	Dix-Hallpike, focused neuro exam	Reassurance, fall prevention
Day 4	Integrated ear cases	Differential formulation, investigation selection	Level 10–11 (Interdisciplinary reasoning)	ENT + Radiology	Case presentation	Professional communication

Specialty	Skill-Based Clerkship Learning Outcomes (LOs)
ENT (Primary Discipline)	• Perform focused ENT history for ear pain, discharge, hearing loss and dizziness • Conduct safe, systematic otoscopy identifying normal landmarks and pathology • Perform and interpret Rinne and Weber tests • Perform Dix–Hallpike manoeuvre correctly • Conduct focused cranial nerve exam in vertigo cases • Present structured ear case with differential diagnosis • Identify and escalate red flag findings appropriately • Counsel patients on ear hygiene and hearing protection
Audiology	• Interpret basic PTA results and correlate with bedside findings • Differentiate conductive vs sensorineural hearing loss using audiogram patterns • Correlate tuning fork findings with audiological results • • Explain vestibular physiology during clinical discussion
Medicine	• Perform focused neurological examination in dizzy patient • Differentiate peripheral vs central vertigo using bedside findings • Identify cerebellar and central red flag signs • • Integrate neurological findings with ENT assessment during case discussion
Pathology	• Select appropriate ear swab sample under supervision • Correlate clinical presentation with likely pathogens • Interpret culture & sensitivity reports • Justify empirical antibiotic selection during ward discussion
Radiology	• Identify indications for CT temporal bone and MRI brain • Correlate imaging findings with clinical suspicion • Justify investigation selection during case-based discussion

Theme - 2

Rhinorrhoea & Nasal Obstruction

Day	Clinical Case	Core Teaching Points	Harden Integration Level	Multidisciplinary	Skills	Attitude
Day 5	Young adult with nasal obstruction	DNS, allergic rhinitis, turbinate hypertrophy	Level 9	ENT	Anterior rhinoscopy	Allergen avoidance education
Day 6	Child with recurrent rhinorrhoea	Infective vs allergic rhinitis, sinusitis	Level 9–10	ENT, Pathology	Sinus exam, X-ray PNS	Rational antibiotic use
Day 7	Elderly with epistaxis	Little’s area, systemic causes, emergency management	Level 10–11	ENT, Medicine	Nasal packing demo	Emergency composure
Day 8	Assessment of Theme 1 + 2					

Specialty	Skill-Based Clerkship Learning Outcomes (LOs)
ENT (Primary Discipline)	• Perform focused history in nasal obstruction and rhinorrhoea • Perform anterior rhinoscopy systematically and identify DNS, turbinate hypertrophy, discharge type • Perform sinus tenderness examination • Demonstrate safe initial steps in epistaxis management • Assist in anterior nasal packing (demonstration level) • Present structured nasal case with differential diagnosis • Identify red flag nasal symptoms requiring urgent referral
ENT (Allergic Rhinitis Focus)	• Differentiate allergic vs infective rhinitis clinically • Identify trigger history suggestive of allergy • Counsel patients on allergen avoidance strategies • Correlate clinical findings with immunological mechanisms during discussion
Pathology	• Correlate nasal discharge characteristics with likely pathogens • Interpret basic lab findings in sinus infection • Justify empirical antibiotic choice during ward discussion • Apply principles of antibiotic stewardship
Medicine	• Evaluate systemic causes of epistaxis (HTN, bleeding disorders) • Assess comorbidities contributing to nasal symptoms • Identify high-risk patients requiring admission • • Integrate systemic and ENT findings in case presentation
Radiology	• Identify indications for X-ray PNS and CT PNS • Correlate imaging findings with sinusitis and structural pathology • • Justify investigation selection in integrated case discussion

Theme - 3

Sore Throat

Day	Clinical Case	Core Teaching Points	Harden Level	Multidisciplinary	Skills	Attitude
Day 9	Acute tonsillitis	Viral vs bacterial differentiation, antibiotic stewardship	Level 9	ENT, Pathology	Throat examination	Judicious prescribing
Day 10	Peritonsillar abscess	Quinsy features, airway risk	Level 10	ENT	Red flag recognition	Urgency awareness
Day 11	Paediatric Adeno tonsillar hypertrophy	OSA, indications for tonsillectomy	Level 10	ENT, Medicine	Paediatric exam	Child-friendly communication
Day 12	Recurrent sore throat	Surgical decision making	Level 11	ENT	Case presentation	Ethical surgical counselling

Specialty	Skill-Based Clerkship Learning Outcomes (LOs)
ENT (Primary Discipline)	• Perform focused throat history in acute and recurrent sore throat • Conduct systematic oropharyngeal examination • Identify signs of acute tonsillitis and peritonsillar abscess • Recognize airway compromise features • Present structured sore throat case with differential diagnosis • Identify indications for tonsillectomy • Counsel patients regarding recurrence and surgical options
Pathology	• Interpret throat swab and culture reports • Justify antibiotic selection based on likely pathogens • Apply principles of antibiotic stewardship during ward discussion

ENT (Primary Discipline)	• Recognize red flag signs of quinsy • Assess airway risk in peritonsillar abscess • Demonstrate calm communication during emergency scenario simulation
Medicine (Systemic Context)	• Identify systemic complications (e.g., rheumatic fever suspicion) • Recognize immunocompromised patients requiring modified management • Integrate systemic assessment in recurrent sore throat cases

Theme - 4

Hoarseness & Dysphagia

Day	Clinical Case	Core Teaching Points	Harden Level	Multidisciplinary	Skills	Attitude
Day 13	Smoker with hoarseness	Laryngeal carcinoma suspicion, red flags	Level 10–11	ENT	Indirect laryngoscopy observation	Cancer sensitivity
Day 14	Progressive dysphagia	Mechanical vs neurological causes	Level 11	ENT, Medicine, GI	Focused dysphagia history	Empathetic counselling
Day 15	Tracheostomy patient	Airway management principles	Level 11	ENT	Tracheostomy care observation	Professional conduct
Day 16	Assessment of Theme 3 + 4					

Specialty	Skill-Based Clerkship Learning Outcomes (LOs)
ENT (Primary Discipline)	• Take focused history in hoarseness and dysphagia • Identify red flag symptoms suggestive of laryngeal malignancy • Observe and interpret indirect laryngoscopy findings • Differentiate inflammatory vs neoplastic causes clinically • Present integrated laryngeal case with differential diagnosis • Recognize airway compromise risk
ENT (Oncology)	• Identify high-risk features for head & neck cancer • Explain need for biopsy in suspected malignancy • Demonstrate sensitivity when discussing cancer suspicion • Understand basics of multidisciplinary tumor board discussion
Medicine	• Differentiate mechanical vs neurological dysphagia clinically • Identify systemic causes contributing to hoarseness/dysphagia • Recognize aspiration risk • Integrate medical comorbidities in management discussion
Gastroenterology (GI)	• Identify indications for Jejunostomy • Correlate symptoms with possible reflux-related laryngeal disease
Radiology	• Identify indications for CT neck in suspected malignancy • Correlate imaging findings with clinical suspicion • Justify imaging selection in integrated case discussion
Pathology	• Understand basics of biopsy interpretation (benign vs malignant features – overview level) • Correlate histopathology report with clinical case discussion

Theme - 5
Neck Masses

Day	Clinical Case	Core Teaching Points	Harden Level	Multidisciplinary	Skills	Attitude
Day 17	Young adult with neck swelling	TB vs reactive vs lymphoma	Level 10	ENT, Pathology, Medicine	Lymph node examination	TB stigma sensitivity
Day 18	Benign Neck swellings	Solitary nodule vs MNG	Level 11	ENT	Neck examination	Approach to patient
Day 19	Parotid swelling	Facial nerve	Level 11	ENT	Facial nerve exam	Respectful communication
Day 20	Integrated head & neck case	Diagnostic pathway planning	Level 11	ENT + Radiology + Pathology	Clinical reasoning	Professional presentation

Specialty	Skill-Based Clerkship Learning Outcomes (LOs)
ENT (Primary Discipline)	• Take focused history in patients with neck swelling • Perform systematic lymph node examination • Perform thyroid examination correctly • Assess facial nerve function in parotid swelling • Identify red flag features suggestive of malignancy • Present structured head & neck case with prioritized differential diagnosis
Pathology	• Interpret FNAC reports at basic level • Correlate clinical findings with cytology results • Recognize when biopsy is indicated • Participate in clinicopathological case discussion

Medicine	• Identify systemic features suggestive of TB, lymphoma, or systemic disease • Evaluate constitutional symptoms (fever, weight loss, night sweats) • Integrate systemic assessment into diagnostic reasoning
Radiology	• Identify indications for ultrasound neck • Interpret basic imaging findings in thyroid and lymph node enlargement • Justify further imaging (CT/MRI) when malignancy is suspected

Theme - 6
Surgical aspects of ENT

Day	Clinical Case	Core Teaching Points	Harden Level	Multidisciplinary	Skills	Attitude
Day 21	Ear blockage, ear discharge, foreign body ear, decreased hearing	Indication, steps, complications of surgeries	Level 11	ENT	Perform suction of ear in OT	Ethical considerations
Day 22	Nasal obstruction, post nasal drip, decreased olfaction	Indication, steps, complications of surgeries	Level 11	ENT	Performing anterior rhinoscopy	Ethical considerations
Day 23	Recurrent sore throat, foreign body ingestion	Indication, steps, complications of surgeries	Level 11	ENT	Assist procedure in OT	Ethical considerations
Day 24	Assessment of Theme 5 + 6					

Specialty	Skill-Based Clerkship Learning Outcomes (LOs)
ENT (Primary Discipline)	• Perform suction of ear • Perform nasal patency test • Perform anterior rhinoscopy • Perform anterior nasal packing • Observe tonsillectomy, adenoidectomy in OT • Observe rigid bronchoscopy, rigid esophagoscopy

Community Oriented Clerkship Module
4th Year MBBS (Rev-2026)
Department Of Community Medicine & Public Health RMU

Theme (aim):

The primary purpose of this module is to educate students in those areas of the subject of CM&PH which are learnt better by onsite presence of the students at certain sites, processes, agencies which have public health relevance and in general community setting. Moreover some, areas of the subject which demands close interactive teachings in small group like HHS data analysis & report writing skills, contraceptive use skills, vaccination skills, etc are also covered during this rotation. All opportunities available within and outside the institution within affordable logistics, time, are focused for this purpose. A short time of this batch rotation is dedicated for health education communication practices as Health awareness work and other social work.

Learning outcomes (LOs):

at the end of this learning module students are expected to achieve following Public health Competencies as will be able to:

1. *Undertake a population based health survey (HHS)*
2. *Appreciate working of First level Care Facility (Public Sector)*
3. *Perform Community Immunization / EPI vaccinations.*
4. *Develop Hospital waste management plans.*
5. *Develop Community based health awareness message.*
6. *Communicate for Health awareness in community settings.*
7. *Commemorate International public health days.*
8. *Develop Hospital administration Plans.*
9. *Undertake Preventive healthcare inquiries and NCDs Risk Factors Surveillance*
10. *Counsel for the contraceptive devices to the community*

Module outline:

- *A batch comprising 20-22 students is posted in the department of CM & PH for a period of 2weeks **(Monday to Thursday-04 hrs. /day & for 32hrs in total**). This schedule is run over the whole academic year, till all students of 4th year MBBS class passes through this rotation.*
- *Batch formation and schedules of rotation for whole class as notified by the DME / Student's section will be followed accordingly.*
- *At commencement of the academic year overall batch learning module coordinator, nomination of batch in-charges, senior faculty in charges and calendar schedule of batch rotation for all batches over the whole academic year will be notified by the Department of CM & PH.*

Domains of learning: *learning will occur in all the three domains C, A & P*

Day	Activity -I 10.30 – 11.00	Activity – II 11.00- 11.30am	Activity -III 11.30- 01.00pm	Act-V 01.00 – 2.00pm	Sites of teaching-learning	Assessment	Session outcome (level of learning)
	Session topic	Session topic	Session topic	Session topic			
1st day	instructing / demonstration on Practical Manual based Assignments	• Visit to CHC • SGIS on Health days commemoration work, Display material, PPT.	• SGIS on HM-DTD practicum. Topic finalization, CHC-Message draft outlines finalization.	• PPT based Demo on How to conduct & report HHS. • Guidelines on PHI work to be done during clinical rotations / ward duties	• Demonstration / lec -Hall 3 • CHC - Dept CM NTBRMU.	• 1-2 OSPE in end of clerkship exam (credit will part of IA) • Assessment of HHS -Report (Max marks:5 part practical /viva exam 4th Prof MBBS)	• Construct a health message. (C6) • Prepare Health days commemoration stuff, Display material, PPT, (P) • Undertake a health survey. (HHS) (C3)
2nd day	Follow up session on. - HM-DTD work - HHS work - health days commemoration work	SGIS/ Briefing / PPT based guidelines on field visit of the day (EPI services center HFH)	FV to the EPI center HFH	Health awareness work (HAW)	• Demo Room, • EPI Center HFH • OPD, hosp	• 1-2 OSPE in end of clerkship exam (credit will part of IA) • Grade of performance in EPI visit reporting. • Credit of HAW	• Explain cold chain component at EPI center • Vaccinate (EPI) vaccines to the clients . • Comprehend EPI system

					ital shelters sites for health awareness work (HAW)		
3rd day	Follow up session on HM-DTD work & HHS	SGIS / Briefing / PPT based guidelines on FV to MCH & FP Services Center HFH	FV to the MCH services & FP center HFH	Health awareness work (HAW)	• FP Center HFH • OPD, hospital shelters sites for HAW	• 1-2 OSPE in end of clerkship exam (credit will part of IA) • Grade of performance in EPI visit reporting. • Credit of HAW	• Identify CP devices available at MHC FP center • Counsel clients for use of a contraception method • Place CP devices to client (P)
4th day	Follow up session on HM-DTD work & HHS	Briefing / guidelines on FV Hospital waste disposal system in hospitals	• FV to the hospital waste dispo	Health awareness work (HAW)	• FP Center HFH OPD, hospital	• End of module OSPE • Grade of performance in visits to sites	• Explain hospital waste disposal system • Develop a hospital waste management plan • Explains various domains of hospital management (C2)

			sal system & relevant sites / Incinerator		shelters sites for HAW		
5th day (week 2)	SGIS / PPT based briefing on Hospital management & administration	Visit to Hospital management & administration (HFH) office		Health awareness work (HAW	HHF	• End of module OSPE • Grade of performance in visits to sites	
6th day	SGIS / PPT based briefing on visit to First level of health care facility (FLCF) BHU/RHC	Field visit to RHC Khyaban Sir-Syed (RHC) or BHU		• Demo room / lec Hall 3 NTB / CPC-Hall . • RHC / BHU	Health awareness work (HAW at site visited	• End of module OSPE • Report credit in PJ	• Explain working of FLCF • Appreciate PHC elements at FLCF. (C2)
7th day	Health days commemoration (walk/ seminar/ presentation/ CHC-message dissemination work (10.30 – 12.00pm)	12.00 – 2.00pm • Completion & assessment of relevant Practical Journal work, • HHS-report book, • Logbook etc. • Feedback discussion on PHI				• Communication skills • Comprehend frequency Preventable RFs of NCDs in the real population (RF surveillance) • Undertake a preventive Healthcare inquiry	
8th day	Museum learning module (MLM) / visit to departmental Museum 10.30- 12.30	• Endo of module OSPE (12.30 – 2.00pm) • OPSE conduction (10 stations video assisted OPSE / OSPE) for 40 total marks .	Plus Completion of any remaining work journal assessment HHS report assessment Students feedback etc				

Community based / Field Visits Each batch will be perform at least 02 filed visits of sites of Public health importance outside the institutions under available opportunities and logistics. Following sites may be considered for the purpose.		
	I. RHC Khiaban-e-Sir-Syed Rawalpindi / DHO II. Sewerage Treatment Plant I-8 Islamabad III. Water purification plant Rawal Dame Islamabad IV. Child protection Bureau Rawalpindi V. Community Livings / urban slums - US-15 Rawalpindi VI. National Vaccination production unit– Chuk Shahzad Islamabad VII. Vaccines & Venom Production Unit, NIH, Islamabad VIII. Clinical Trail Unit, NIH- Islamabad IX. Diseases Surveillance & control / SAAL office. NIH Islamabad X. WHO-Office, Chuk Shahzad, Islamabad XI. National Command & Operation Control Office (NCOC) / System. Disaster Control & Management office Islamabad XII. Office of Punjab Food Control Authority – Rawalpindi XIII. Drug intoxication & Rehabilitation center Dept of Psychiatry BBH Rawalpindi XIV. Any site appropriate & feasible for the purpose.	**LOs:** Students will better comprehend the System, Mechanism, or Processes (visited) of community health or public health relevance in regional practices context. (**Practice based Learning)** **Feasibility, opportunity, and logistics:** every visit will be planned subject to: 1. Approval of competent authority (RMU) in given conditions. 2. Time space available (total 8 days rotation & with max 04 hrs. a day) 3. Availability of Transport 4. Consent / approval of f remote sites 5. Another justified pre-visit approval/favor or fulfillment of need.

SOPs of Learning & Assessments:

- *Active participation will be graded by the batch in charge **(under a check list)** during the activity / session and grades/marks will be entered in the practical manual as out of 05 (Max marks 05) by the batch in charge. O5 Max Marks are reserved for CHC (HMDTD and Health awareness work.*
- *Assessment will be done by **OSPE / MCQs Exam / Viva voce** at the end of each module and credit will be objectively recorded for the purpose of internal assessment. (Max mark 10)*
- *General assessment of the subject learning will be through MCQs, SEQs & OSPE on the relevant subjects in the relevant end of modules, block exams and Send up Exams.*
- ***Students are required to report / write the relevant work in Practical Journal, House Hold Survey Report Book and log all the clerkship activities in the Logbook on daily basis.***

Core Planner of Community Oriented Clerkship (2 weeks batch rotation)
[Calendar schedule as notified by DME will be followed accordingly]

Note:

1. Calendar schedule of each batch will be noticed by the Department of community Medicine prior to the commencement of the batch rotation.
2. Students will have to record all activities of the clerkship in the relevant Logbook accordingly. Students will keep logbook updated and duly signed by faculties & departments.

16.Research

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

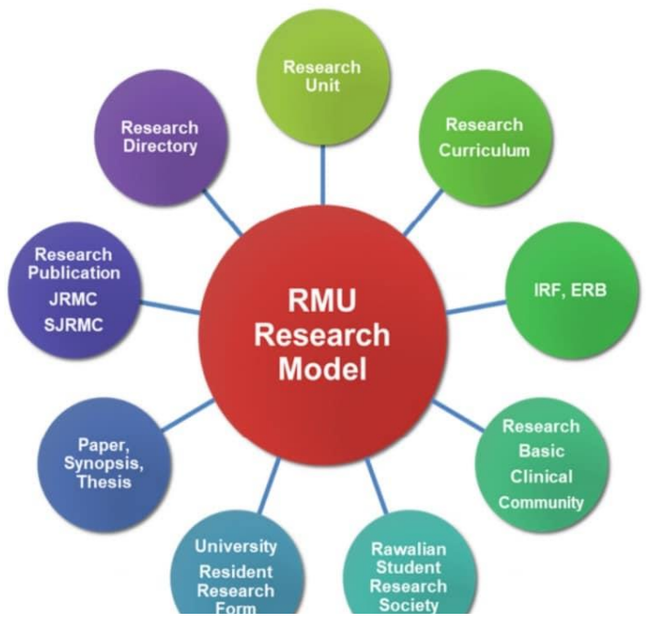


Figure 30 – RMU Research Model

17. Biomedical Ethics

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

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

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

18. Family Medicine

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

19.Artificial Intelligence

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

Section – V Learning Management System (LMS)

Theme Based LMS Assessment
4th year MBBS 2026
ENT Block-X Module-1

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.

Introduction:

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

1.Course Creation & Management:
•Allows instructors or administrators to create and organize courses, modules, lessons, and assessments.
•Supports multimedia content such as videos, quizzes, PDFs, and presentations.

2.User Management:

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

3.Assessment & Testing:
Includes features for creating and administering quizzes, assignments, and exams. Provides automated grading and feedback to learners.

4.Reporting & Analytics:
•Tracks learner performance, course completion rates, and engagement levels.
•Provides insights to instructors and administrators for informed decision-making.

5.Communication Tools:

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

6.Scalability & Flexibility:

•Can accommodate a growing number of learners or users.
•Supports a variety of learning styles, including synchronous (live) and asynchronous (self-paced) learning.

7.Mobile Access:

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

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:

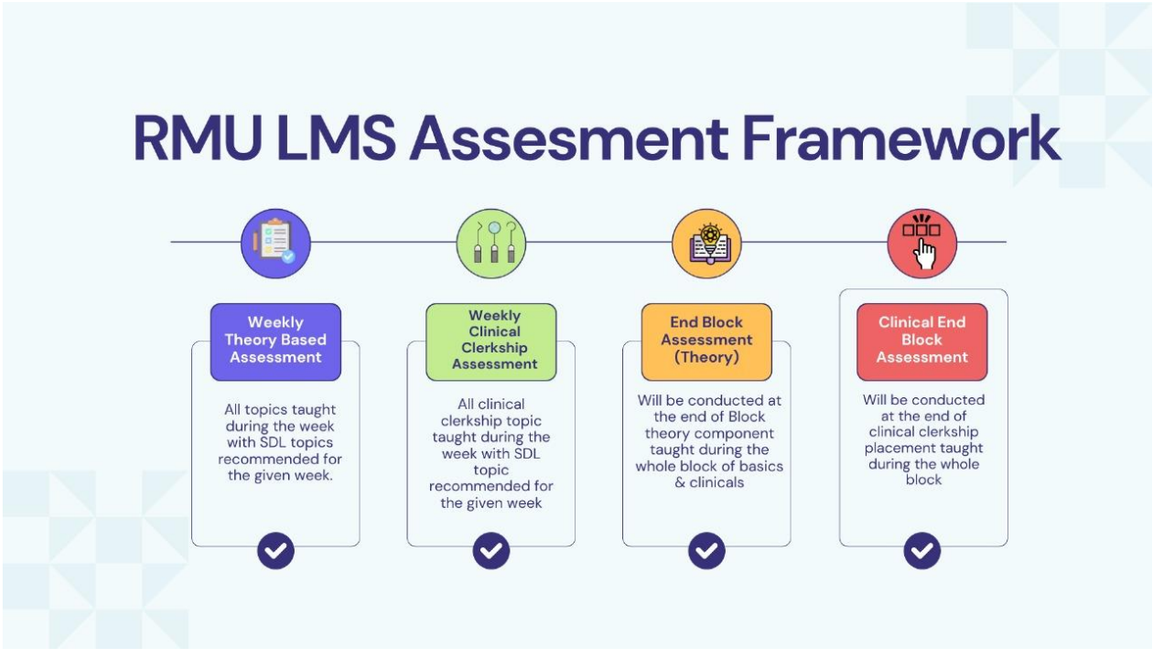


Figure 27: Framework for LMS Assessment for Undergraduate Medical Students

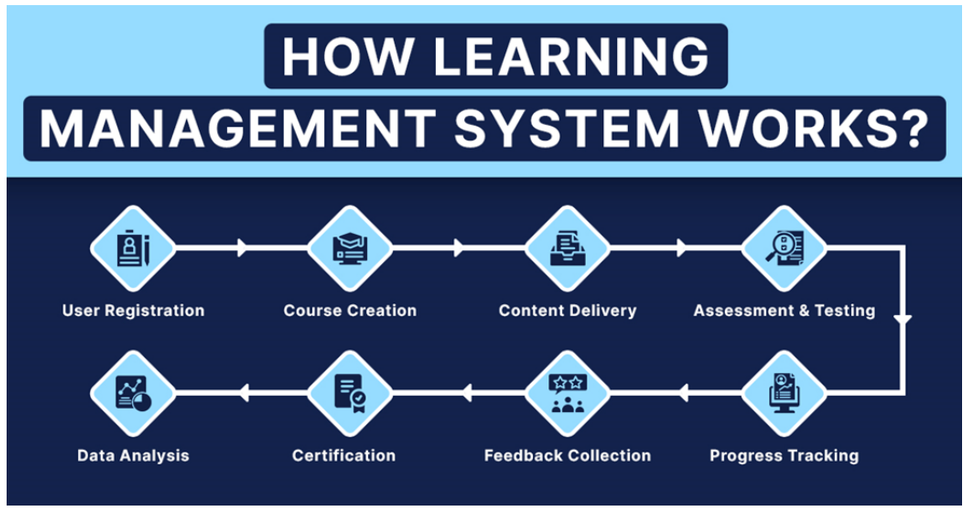


Figure 28: How learning management system works

Implementation of LMS

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

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

For 4th year:

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

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

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

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

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

Implementation of LMS:

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

1.Infrastructure Setup:

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

2.IT Department Support:

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

3.User Credentials:

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

4.Exam Scheduling:

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

5.Automated Notifications:

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

6.Test Notices:

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

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

LEARNING MANAGEMENT SYSTEM RMU

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

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

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

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

- **Efficient Delivery of Educational Content:**

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

- **Student-Centered Learning:**

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

- **Interactive and Engaging Learning:**

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

- **Streamlined Academic Monitoring:**

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

- **Standardization and Quality Assurance:**

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

- **Feedback and Continuous Improvement:**

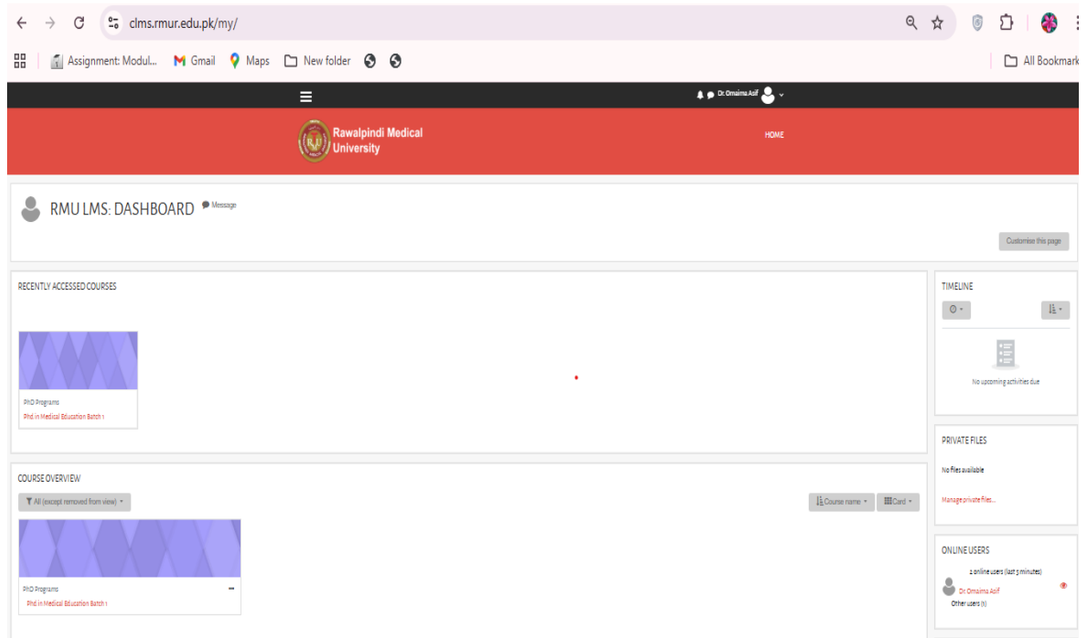
To integrate feedback mechanisms that involve students, faculty, and other stakeholders, driving continuous quality improvement.

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

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

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

RMU LMS Website



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

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.

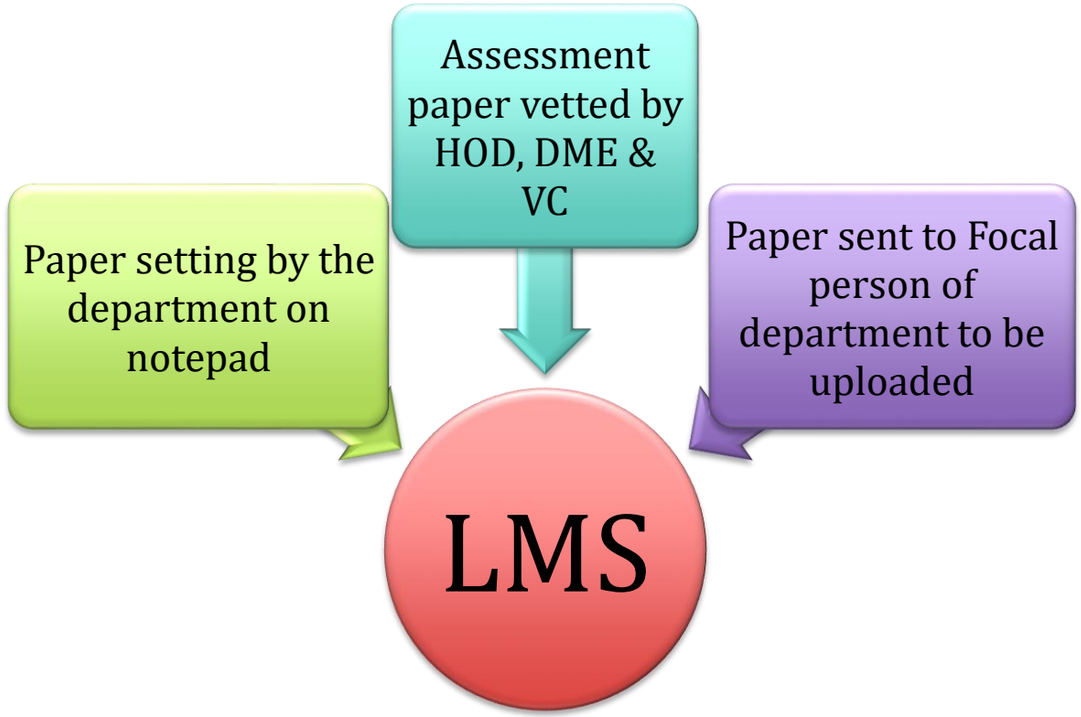
LMS as Part of CIA: What It Means for Students

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.

LMS Assessment Papers



Hierarchy of conducting LMS

Figure 29: LMS Assessment paper setting, vetting, uploading

Sample paper

Papers attached as Annexure

PATHOLOGY

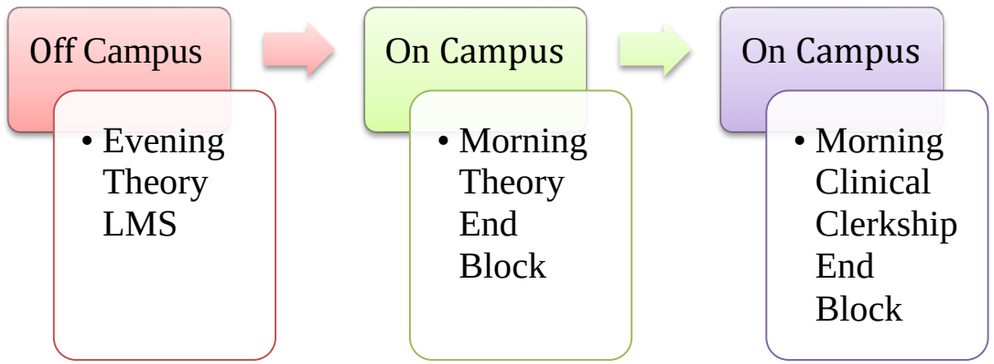
Q: A 7-year-old child develops fever and a vesicular rash that starts on the trunk and spreads to the face and limbs. What is the most likely causative agent?
A. Herpes Simplex Virus-1
B. Epstein-Barr Virus
C. Cytomegalovirus
D. Varicella-Zoster Virus
E. Parvovirus B19
ANSWER: D

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

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

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

Assessment Results of LMS MBBS



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

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

Theory Based Off Campus Module wise weekly LMS results

Analysis of results:

Total Students	365	365	365	365	365	365	365	365	365	365	365	365
Absent	3	4	12	12	5	0	1	3	2	1	0	2
Appeared	362	361	353	353	360	365	364	362	363	364	365	363
Failed	71	59	70	60	50	19	9	21	22	26	27	39
Passed	291	302	283	293	310	346	355	341	341	338	338	324
Passing %age	80%	84%	80%	83%	86%	95%	99%	94%	94%	93%	93%	89%

Detailed analysis:

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

1. Overall Performance Overview

Total Students: 365

Total Assessments: 28

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

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

2. Analysis of Performance by Subject/Module

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

Top Performing Modules:

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

Moderate Performing Modules:

a) FM-II & FM-III (Forensic Medicine): Shows a wider spread of scores. While many students scored highly, there are also several instances of very low scores and zeros, indicating variability in preparation or attendance for these specific tests.
b) Heam (Haematology): Performance is good, but slightly more varied than in CVS or Microbes.

3. Analysis of Individual Student Performance

Students can be broadly categorized into three groups:

Consistently High Achievers:

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

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

The Inconsistent Performers (Largest Group):

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

Selective Preparation: Excelling in some subjects but not others.

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

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

Students Needing Academic Support:

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

Examples:

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

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

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

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

4. Critical Observations and Potential Issues

Significant Non-Participation ("0" Scores):

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

Data Inconsistencies and Errors:

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

Possible Grading Errors: Some scores seem anomalous.

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

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

Incomplete Records:

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

Conclusion

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

Theory Based On Campus End of Block LMS results

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

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

Complete result is attached as Annexure B

Analysis:

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

Detailed Analysis:

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

Data Summary

Total Students: 366

Block VII: 366 students listed.

Block VIII: 366 students listed.

2. Key Findings & Detailed Analysis

2.1. Overall Performance & Pass/Fail Rates

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

Corrected Analysis (Manual Calculation based on full dataset):

Block VII:

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

Appeared: 356 students.

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

Passed (≥70%): 355 students.

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

Block VIII:

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

Appeared: 357 students.

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

Passed (≥70%): 349 students.

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

2.2. Comparative Analysis: Block VII vs. Block VIII

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

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

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

2.3. Identification of At-Risk Students

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

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

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

Examples:

Roll #292: 90% → 50% (-40%)

Roll #84: 81% → 58% (-23%)

Roll #321: 89% → 59% (-30%)

Roll #270: 88% → 75% (-13%)

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

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

3. Recommendations

Academic & Administrative Actions:

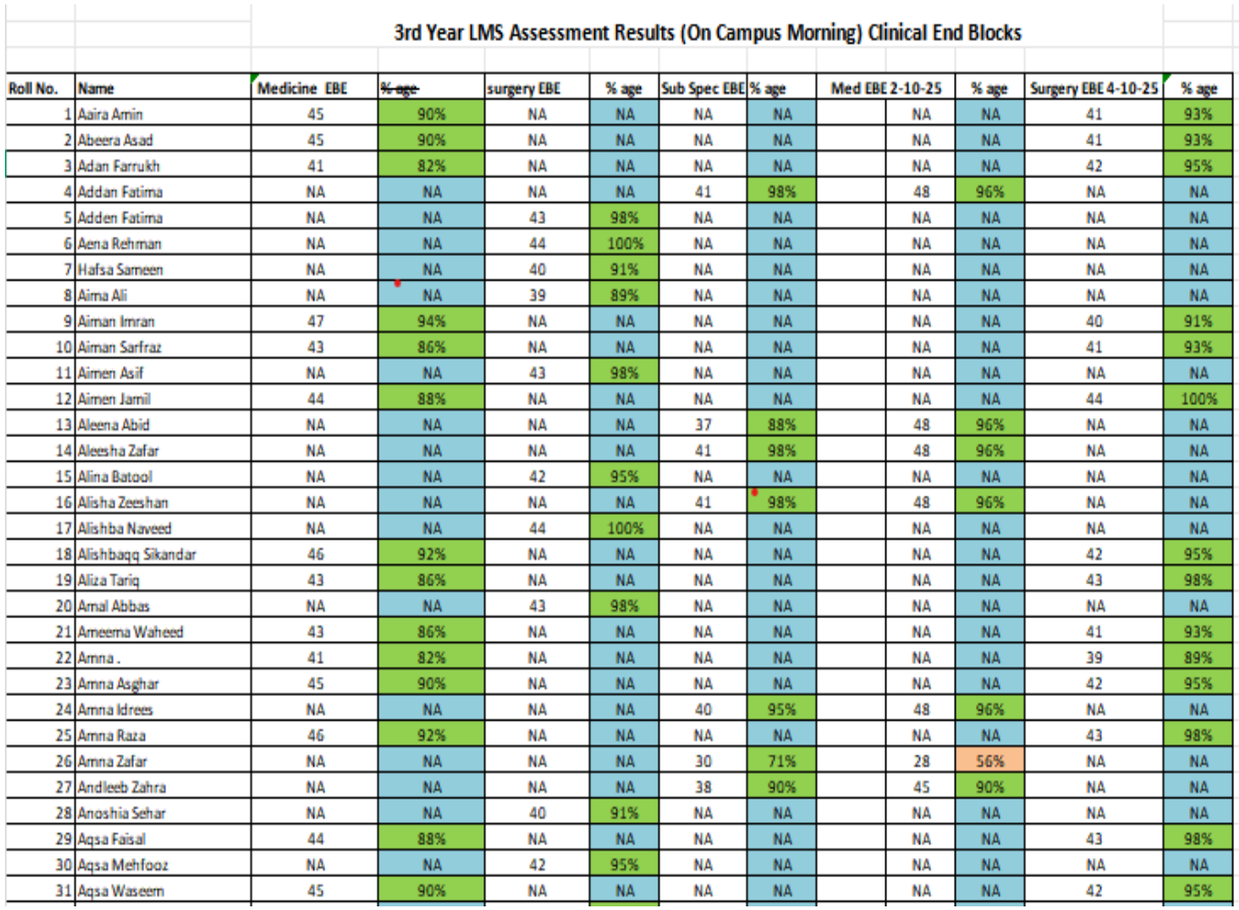
Intervene with At-Risk Students:

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

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

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

Theory Based On Campus End of Clinical Block LMS results



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

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

Complete results attached as Annexure C

Detailed Analysis:

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

1. Data Structure & Examination System

Purpose: To record clinical exam scores for students rotating through different medical wards.

Examination Model: The data suggests a Objective Structured Clinical Examination (OSCE) or ward-based clinical exam (EBE) format, where students rotate through stations or postings.

Key Columns & Interpretation:

G. Medicine EBE / H. Surgery EBE / K. Sub Spec EBE: These appear to be the primary clinical rotations. The "Sub Spec" likely refers to sub-specialties like Gynecology, Pediatrics, Psychiatry, etc.

M. Med EBE 2-10-25 / P. Surgery EBE 4-10-25: These are re-sit or repeat examinations for the respective blocks. The naming convention (`2-10-25`, `4-10-25`) likely refers to specific dates, indicating these were offered later for students who failed or missed the first attempt.

Grading System:

The raw scores are out of 50 points (e.g., a score of 45 equals 90%).

The passing benchmark is 70% (a raw score of 35/50). This is consistent with the theory sheet and standard medical education practices.

2. Key Findings & Detailed Analysis

2.1. Overall Performance & Pass/Fail Rates

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

Overall Pass Rate: Extremely high. The vast majority of students who attempted an exam passed it. The number of failing scores (<35/50) is minimal.

Performance Distribution: The data is heavily skewed towards high performance. It is common to see scores of 40+/50 (80%+), with a significant cluster at 44/50 (88%) and 45/50 (90%). This suggests the exams are well-aligned with the taught curriculum or the grading is competency-based, expecting high performance.

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

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

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

Evidence:

Roll #26 (Amna Zafar): A consistent at-risk student. Scored 30/50 (60%) in Sub Spec, and a very low 28/50 (56%) in the primary Medicine EBE. She then re-attempted Medicine (Med EBE 2-10-25) and scored 48/50 (96%).

Roll #67 (Eman Fatima): Scored 39/50 (78%) in Medicine but failed the Surgery re-sit with 28/50 (64%).

Roll #232 (Roumman Ashraf): Failed Sub Spec with 27/50 (64%) but passed the other re-sits.

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

2.3. Identification of At-Risk & Outstanding Students

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

B. Students Requiring Immediate Intervention:
This is a critical category. These students have failing grades and may be in academic jeopardy.

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

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

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

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

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

C. Students with Significant Performance Gaps:

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

2.4. Data Quality and Logistical Notes

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

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

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

3. Scientific & Educational Implications

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

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

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

	TOPICS OF LGIS & SGD	TOPICS OF SDL	LEARNING OBJECTIVES OF SDL	LEARNING RESOURCES	MODE OF ASSESSMENT
Theme 1	Anatomy and physiology of ear / vestibular system Acute otitis media Otitis media with effusion Acoustic neuroma Sensorineural hearing loss,Noise-induced, Drug induced hearing loss Tympanometry ,Audiology Chronic otitis media Bell's palsy/Facial palsy Ramsay Hunt syndrome External ear inflammatory Conditions Malignant otitis externa Otosclerosis,Meniere's disease FB Ear Management	Anatomy/Radiology of temporal bone CT scan temporal bone X ray mastoid MRI temporal bone	Parts of ear and vestibular system • Functions of cochlea and vestibular system • Biochemical processes of cochlea and vestibular system • Definition of acute otitis externa and malignant otitis externa • Clinical features, diagnosis, investigations • Management plan	Diseases of ear nose thar Dr Saleem Iqbal Bhutta • Scott Brown Otorhinolaryngology Head & Neck Surgery, Eighth Edition • Diseases of Ear, Nose and Throat & Head and Neck Surgery, Seventh Edition, PL Dhingra • Color Atlas of ENT diagnosis, Tony R. Bull, 5th Edition • Ear, Nose and Throat, Self-Assessment and Self Evaluation Manual, Second Edition, PL Dhingra	LMS Based MCQs

	Myringotomy,grommet insersion,Myringoplasty, Mastoidectomy				
Theme 2	Anatomy & Physiology of Nose and PNS Acute and chronic Rhinosinusitis with complications,Fungal rhinosinusitis Nasal polyps ,FESS Allergic/Non-allergic rhinitis DNS,Septoplasty Nasopharyngeal angiofibroma Epistaxis and management FB nose and Rhinolith Nasal trauma,Septal hematoma Septal abscess,Septal perforation Granulomatous diseases of nose,rhinoscleroma,SLE, Wegner's Sarcoidosis,tuberculosis,leprosy	Discuss granulomatous diseases of nose along with Xray PNS CT Scan nose and PNS	By the end of this theme, students will be able to: 1.Correlate nasal and paranasal sinus anatomy with common symptoms such as rhinorrhea, obstruction, and epistaxis. 2.Differentiate benign inflammatory conditions from structural ,neoplasticand granulomatous causes. 3.Identify emergency presentations such as severe epistaxis and sinonasal masses. 4.Interpret basic imaging findings in nasal and sinus pathology. 5.Develop appropriate medical and surgical management strategies. 6.Promote preventive strategies including allergy	Diseases of ear nose thar Dr Saleem Iqbal Bhutta • Scott Brown Otorhinolaryngology Head & Neck Surgery, Eighth Edition • Diseases of Ear, Nose and Throat & Head and Neck Surgery, Seventh Edition, PL Dhingra • Color Atlas of ENT diagnosis, Tony R. Bull, 5th Edition • Ear, Nose and Throat, Self-Assessment and Self Evaluation Manual, Second Edition, PL Dhingra	LMS Based MCQs

			control and early referral of suspicious lesions		
Theme 3	Anatomy and Physiology of oral cavity and pharynx Adenoiditis,Acute and chronic tonsillitis Adenoidectomy,tonsillectomy Premalignanat lesions of oral cavity Quinsy,retropharyngeal abscess,parapharyngeal abscess Acute and chronic pharyngitis Salivary gland diseases and management Oral cavity tumors	Discuss clinical features,investigations and management of Adenoid hypertrophy and salivary gland diseases	By the end of this theme, students will be able to: 1.Apply knowledge of pharyngeal anatomy to evaluate sore throat and neck infections. 2.Differentiate acute infections from chronic and deep neck space infections. 3.Identify life-threatening airway complications. 4.Formulate rational antimicrobial and supportive management plans. 5.Recognize indications for surgical intervention (e.g., tonsillectomy, abscess drainage). 6.Educate patients and families regarding prevention and early warning signs.	Diseases of ear nose thar Dr Saleem Iqbal Bhutta • Scott Brown Otorhinolaryngology Head & Neck Surgery, Eighth Edition • Diseases of Ear, Nose and Throat & Head and Neck Surgery, Seventh Edition, PL Dhingra • Color Atlas of ENT diagnosis, Tony R. Bull, 5th Edition • Ear, Nose and Throat, Self-Assessment and Self Evaluation Manual, Second Edition, PL Dhingra	LMS Based MCQs

ENT Block-1 Module-2

WEEK	TOPICS OF LGIS & SGD	TOPIC OF SDL	LEARNING OBJECTIVES OF SDL	LEARNING RESOURCES	ASSESSMENT TOOL
Theme 4	Anatomy of larynx, trachea, bronchi and esophagus Vocal nodules, vocal polyp, Reinke's edema FB aerodigestive tract Laryngomalacia, juvenile laryngeal papillomatosis Plummer Vinson syndrome Tracheostomy and complications Causes of hoarseness and stridor, management Esophagoscopy, bronchoscopy CA larynx	Causes of dysphagia, investigations, management Vocal cord paralysis Radiology of neck and Barium swallow	By the end of this theme, students will be able to: 1.Correlate laryngeal anatomy and nerve supply with voice and swallowing disorders. 2.Develop a structured approach to persistent hoarseness and dysphagia. 3.Identify red-flag features suggestive of malignancy. 4.Interpret imaging and endoscopic findings in laryngeal disease. 5.Outline principles of oncologic management and airway safety. 6.Advocate lifestyle modification and early	Diseases of ear nose thar Dr Saleem Iqbal Bhutta • Scott Brown Otorhinolaryngology Head & Neck Surgery, Eighth Edition • Diseases of Ear, Nose and Throat & Head and Neck Surgery, Seventh Edition, PL Dhingra • Colour Atlas of ENT diagnosis, Tony R. Bull, 5th Edition • Ear, Nose and Throat, Self-Assessment and Self Evaluation Manual, Second Edition, PL Dhingra	LMS based MCQs

			screening for head and neck cancers.		
Theme 5	Cervical lymphadenopathy Thyroid gland and diseases Anatomy of neck Branchial cyst/branchial fistula Radiology of neck Ludwig's angina Acute epiglottitis/laryngotracheobronchitis Differentials of neck masses	Discuss anatomy of neck Discuss cystic hygroma and carotid body tumors	By the end of this theme, students will be able to: 1.Apply knowledge of neck anatomy, lymphatic drainage, and thyroid physiology in evaluating neck swellings. 2.Differentiate congenital, inflammatory, infectious, and malignant causes. 3.Identify emergency presentations involving airway compromise. 4.Develop rational investigation and referral pathways. 5.Outline principles of medical and surgical management. 6.Emphasize the role of immunization, early detection, and public health strategies in prevention	Diseases of ear nose thar Dr Saleem Iqbal Bhutta • Scott Brown Otorhinolaryngology Head & Neck Surgery, Eighth Edition • Diseases of Ear, Nose and Throat & Head and Neck Surgery, Seventh Edition, PL Dhingra • Color Atlas of ENT diagnosis, Tony R. Bull, 5th Edition • Ear, Nose and Throat, Self-Assessment and Self Evaluation Manual, Second Edition, PL Dhingra	LMS based MCQs

Section – VII Assessment

Introduction

Assessment refers to the processes employed to make judgments about the achievements of students over a course of study. *Hardlen W,2005*

Lack of assessment and feedback, based on observation of performance in the workplace, is one of the most serious deficiencies in current medical education practice.
John Norcini and Vanessa Burch 2007

Assessing learners is a critical and challenging task for tutors. While students might manage to overcome subpar teaching, poor or inaccurate assessment of their abilities can have lasting impacts on their personal and professional development. Assessment is vital not only for students but also for tutors, course organizers, and accrediting bodies (such as affiliated universities or PMCs). Assessment data plays a crucial role in determining if learning outcomes have been met, thereby facilitating students' progression to the next course level.

Integrated assessment requires a comprehensive analysis and understanding of the process. To establish a strong foundation, key questions need to be addressed:

1. **Why assess students?**
    - The purpose of assessment must be well-defined. It should include assessment for learning (as a strategy to enhance learning) and assessment of learning (summative assessment) for progression, remediation, or promotion purposes.
2. **Who should assess students?**
    - The assessment should involve multiple stakeholders, including program advisors/organizers, accrediting bodies, affiliated universities, enrolled colleges, tutors, other healthcare professionals, and the students themselves, as well as standardized patients. The PMC will supervise the assessment process, which medical universities will carry out in their affiliated colleges.
3. **What should be assessed?**
    - All relevant competencies must be assessed. The objectives of the integrated curriculum should align with the content being assessed, considering the teaching context. The chosen assessment materials should reflect valued competencies such as higher-order thinking, clinical skills, behavior/attitudes, and professionalism, among other essential requirements.

Assessment is the systematic basis for making inferences about the learning and development of students. It is the process of defining, selecting, designing, collecting, analyzing,interpreting, and using information to increase students' learning and development.

Table Of Specifications

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, Orthopaedics, Urology) Medicine & Allied(Nephrology, Dermatology, Psychiatry, Family Medicine)
c. **Vertically integrated Subjects-** Medicine, Surgery, Gynae & OBS, Pediatrics
d. **Horizontally Integrated Subjects-** Inter departmental integration with 4^{th} 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:

5.1.2.1. Objective Structured Practical Examination (OSPE):

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

i. **Laboratory OSPE (Lab OSPE):** This section will comprise of practical components of core subject areas.
ii. **Integrated OSPE (i-OSPE):** This section will comprise of horizontal and vertical integration.
iii. **Clinically integrated OSPE (Ci OSPE):** This section will comprise of stations, one from research and one from ALPHA
iv. **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.
v. **Objectively Structured Viva Examinations (OSVE):** where student will be examined by the internal & external examiner using a structured making rubric for marking questions.

6. **Examination Eligibility:**

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

7. **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.

8.**Supplementary Examination Criteria:**

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

Table of specifications of Annual MBBS third professional Examinations 2026, Batch 50

- Total First Professional Marks: 1600
- Annual Marks (60%) = 960 Marks
- Continuous Internal Assessment (40%) =640 Marks
  Components of CIA:
  A: CIA calculated from on campus assessments including LMS (on campus) =30%=480 Marks
  B: CIA calculated from Online LMS Assessments =10%=160 Mark

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

Table of specifications of Annual MBBS fourth professional Examinations 2026, Batch 50

A: Subject wise distribution of Marks for 4th year MBBS (Batch 50)

Block	Subjects	Theory	Practical	Total marks
Block 1	ENT	60 marks	60 marks	120 marks
	Community Medicine	30 marks	30 marks	60 marks
	Total	**90 marks**	**90 marks**	**180 marks**
Block 2	**Subjects**	**Theory**	**Practical**	**Total marks**
	EYE	60 marks	60 marks	120 marks
	Community Medicine	30 marks	30 marks	60 marks
	Total	**90 marks**	**90 marks**	**180 marks**
Block 3	**Subjects**	**Theory**	**Practical**	**Total marks**
	Pathology	50 marks	50 marks	100 marks
	Pharmacology	25 marks	25 marks	50 marks
	Community Medicine	15 marks	15 marks	30 marks
	Total	**90 marks**	**90 marks**	**180 marks**
Block 4	**Subjects**	**Theory**	**Practical**	**Total marks**
	Pathology	40 marks	40 marks	80 marks
	Pharmacology	35 marks	35 marks	70 marks
	Community Medicine	15 marks	15 marks	30 marks
	Total	**90 marks**	**90 marks**	**180marks**
Block 5	**Subjects**	**Theory**	**Practical**	**Total marks**
	Dermatology	15 Marks	15 Marks	30 Marks
	Nephrology	15 Marks	15 Marks	30 Marks

	Psychiatry	15 Marks	15 Marks	30 Marks
	Family Meidicine	15 Marks	15 Marks	30 Marks
Block 6	**Total**	**60 Marks**	**60 Marks**	**120 Marks**
	Subjects	**Theory**	**Practical**	**Total marks**
	Urology	20 Marks	20 Marks	40 Marks
	Orthopedic	20 Marks	20 Marks	40 Marks
	Neurosurgey	20 Marks	20 Marks	40 Marks
	Total	**60 Marks**	**60 Marks**	**120 Marks**
GRAND TOTAL MARKS				**960 Marks**

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 ciOSCE 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**
	MCQs			**Component**	**No of Items**	**Marks**	
Psychiatry		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**

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**	

Assessment Policy

This policy is applicable to all the students of the MBBS program of RMU for all modes of teaching (on campus/online/any other) from the date of approval by the RMUAcademic Council.

1. Guiding principles

- RMU has the responsibility to ensure to all the stakeholders that students have achieved the identified outcomes of the medical degree course.
- Assessment requires a variety of methods; no single method can completely ensure that the requisite competence level has been achieved. Hence each assessmentinstrument must be selected based on its utility index.
- Feedback, ensuring that the feedback loop is closed, should be provided to students following all assessments to ensure that students identify gaps in their learning andfaculty can review future curricular and assessment content.
- The quality of the entire assessment including confidentiality of the assessment process must be ensured.
- The assessment process should be clear and transparent so that students know in advance the expectations (from students) and consequences of the assessment.
- Details of the conduct of examinations are available in the Examination policy document.

2. Purposes of assessment

- Feedback to students regarding their readiness and deficiencies.
- To ensure appropriate competence has been achieved.
- Feedback to faculty to evaluate the effectiveness of the teaching program.

3. Forms of assessments

Formative Assessment

A formative assessment refers to a low-stakes assessment that does not normally contribute towards a student's final grade. A formative assessment may include summarizing the mainpoints in a lecture or a weekly quiz to test comprehension of the reviewed content.

(assessment for learning) is carried out throughout modules and clerkships using various strategies (at the discretion of module coordinators and clerkship directors) feedback.Formative assessment performance may be taken as a continuous assessment.

Summative Assessment

A summative assessment is any method of evaluation performed at the end of a unit that allows a teacher to measure a student's understanding, typically against standardizedcriteria. Assessment of learning takes place at the end of modules/ blocks and clerkships and comprises of:

Written assessment (50%)

Multiple Choice Questions (MCQs)	40% Will be as
USMLE formatExtended Match Questions (EMQ)	10%
Short answer questions (SAQs)	50%

a. Performance (Practical) assessment (50%)

Objective Structured Practical Examination (OSPE) Years I, II and III Objective Structured Clinical Examination (OSCE) Years IV - V Shortcases will be included in OSCE

4. Assessment and their timings

- The module/ clerkship teams will be responsible for their assessment plan mentioning assessment strategies, timings, and other essentials (please refer to theindividual plans).

- Students will be briefed about the pattern and scoring of the assessments before the examination.
- Professional examination will be taken by RMU.

5. Weekly LMS (learning management system) assessment of LGIS and SDL

- There will be weekly assessment of LGIS and SDL of whole week at end of week through LMS.
- The LMS result will be shared by module coordinator and DME through vice chancellor on weekly basis.

6. Eligibility to appear in End Block Assessment (EBA)

- This will be applicable to all the blocks of undergraduate program
- 80% attendance in each subject will be mandatory
- Student must pass in all LMS, mid module assessments to appear in EBA
- There will be no remedial classes for attendance compensation
- There will be no remedial of assessment after poor performance

7. Eligibility to appear in Pre-Annual Assessment (PAA)

- 80% attendance in each block is required to appear in PAA
- It is mandatory to appear in all EBA to appear in PAA
- Appraisal letter from head of departments will be needed to appear in pre-annual assessment.

8. Attendance policy

- 90% attendance in each block is required to appear in PAA
- There will be extra marks given as per rules.
- Attendance of the students will be shared by coordinator of module and DME through vice chancellor RMU on weekly basis.
- These marks will be counted in annual professional assessment.

9. Eligibility to appear in annual professional assessment

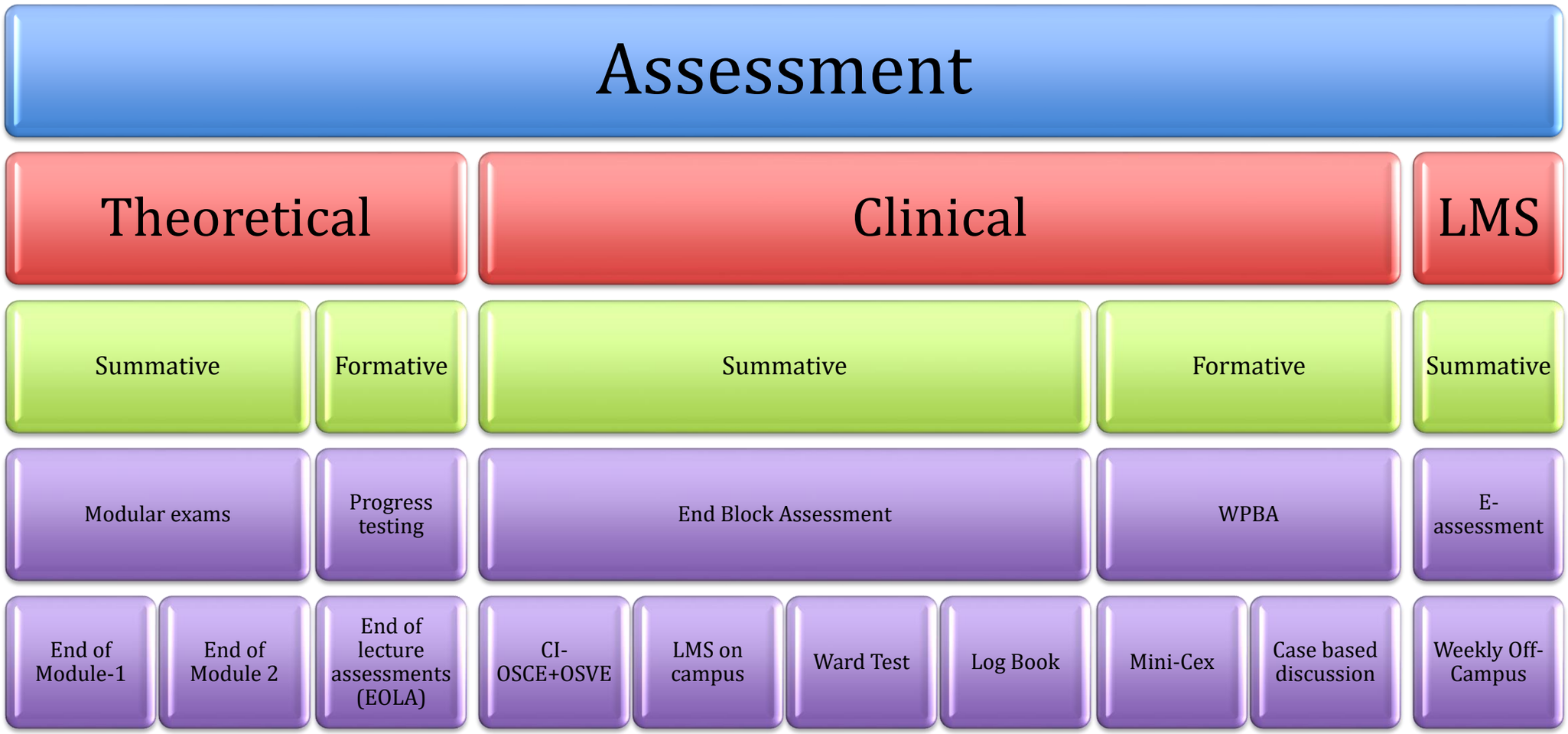
- Minimum 60% score in pre-annual assessment is required to appear in annual professional examination.
- Written and practical /OSPE/OSCE should be passed separately.

10. Passing criteria in annual professional examination

- 50% marks will be needed to pass annual professional examination.

11. Total break up of assessment score

- Annual professional exam weightage 70%
- Continuous internal assessment weightage 30%


Assessment
Theoretical
Clinical
LMS
Summative
Formative
Summative
Formative
Summative
Modular exams
Progress testing
End Block Assessment
WPBA
E-assessment
End of Module-1
End of Module 2
End of lecture assessments (EOLA)
CI-OSCE+OSVE
LMS on campus
Ward Test
Log Book
Mini-Cex
Case based discussion
Weekly Off-Campus

ENT (Otorhinolaryngology) Block
Table of Specifications

Department of Medical Education

Rawalpindi Medical University/Allied Hospitals

Preamble

The Table of Specifications (TOS) is a detailed framework that describes how assessment items are distributed in terms of content among modules in our prestigious medical university's curriculum. The TOS was created with great care 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 offers clarity and transparency by outlining the cognitive levels, domains, and weightings of assessment items. This helps faculty members create tests that appropriately measure students' understanding of critical competencies and knowledge areas. The TOS, which is based on pedagogical ideas and evidence-based practices, symbolizes our dedication to provide our graduates with the necessary skills, knowledge, and professionalism in medical education to achieve success in their chosen industries and contribute significantly to the medical community and society at large.

Components of TOS:

The following elements are usually included in a Table of Specifications (TOS):

Content Domains or Areas: The assessment's broad categories or content domains are described in this section. These domains have to match the course or module's curriculum and learning objectives.

Weightings or Percentages: Gives each topic area or cognitive level a certain amount of weight or proportional value. This makes it easier to guarantee that the evaluation accurately captures the importance that the curriculum places on certain subjects or abilities.

Assessment Items: Describes the many kinds of assessment items that will be used in the assessment, such as essays, multiple choice questions, short answer questions, and practical tests. The number of items assigned to each content area and cognitive level may also be stated in this section.

Blueprint: A graphic depiction of the TOS that outlines how assessment items are distributed throughout curriculum categories. It frequently takes the shape of a table or matrix.

Modules in 4th Year MBBS

Block	Module Name	Duration
(Block I)	Otorhinolaryngology I	3 weeks
	Otorhinolaryngology II	3 weeks
(Block II)	Ophthalmology I	3 weeks
	Ophthalmology II	3 weeks
(Block III)	Endocrinology I	3 weeks
	Population medicine& reproduction II	6 weeks
(Block IV)	Renal I	3 weeks
	CNS & Psychiatry II	6 weeks

Assessment strategies to assess module:

Formative: Formative assessment is a process used by teachers during instruction that provides feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes.

LMS (Learning Management System): Weekly LMS based assessment will be carried out in all the modules from the topics already provided in the study guide.(TOS sample annexure 1)

End Modular: End Modular Assessment will be carried out at the end of the module from the course taught till that day. (TOS Sample Annexure 2) **Summative**: summative assessment evaluates student learning at the end of a block/ professional year.

MCQs: Multiple-choice questions (MCQs) are a type of assessment item commonly used in educational settings to evaluate a person's knowledge or understanding of a topic. In a multiple-choice question, the respondent is presented with a question or statement, known as the stem, along with several options, one of which is the correct answer (the key), while the others are incorrect (distractors). The respondent selects the option they believe to be the correct answer.

SAQs: Short answer questions are a type of assessment item used to evaluate a person's understanding of a topic or concept. Unlike multiple-choice questions, which provide a list of options for respondents to choose from, short answer questions require respondents to generate their own answers without the aid of options provided by the question.

Assessment tools & strategies

Tools of assessments:

Theory assessment

a. MCQs

b. SAQs & SEQs

c. EMQs

d. AV-OSPE

Clinical Assessment

a. Objectively Structured Viva Examination (OSVE).
b. Ci-OSCE (Clinically Integrated-OSCE)

c. Ward test

d. Log book

LMS

1. Off campus
2. On-Campus

Proposed TOS of on campus Assessments during whole Academic Year 2026 (RMU)

Block Name & Order	Modules Names & Numbers	Theory			Scheme of Integration							Practical Assessment									
		25 MCQs (1 mark each)	5+1 SAQ +EMQ (5 marks each)	5 SEQs (9marks each)	Core Subject. 70%		Hori- & Verti- Integ. 20%		*Spiral Integ. 10%		Total marks Theory	OSVE				OSPE (05 marks each)			Total marks Practical	End Block LMS (MCQs Based)	Total Block marks
												Module I		Module 2		Observed	Unobserved	Video assisted			
I Otorhinolaryngology	ENT I & II	Total marks	Total marks	Total marks	MCQs (19)	SAQ/ SEQ +EMQ (7+1)	MCQs (4)	SAQ /SEQs (2)	MCQs (2)	SAQ (1)	100	Viva marks	**Book marks	Viva marks	Book marks	5 stations	5 stations	10 stations	150	30	270
		25	25+5	45	19	46	4	12	2	7		45	5	45	5	25 marks	25 marks	50 Marks			
II Ophthalmology	EYE I & II	25	25 +5	45	19	46	4	12	2	7	100	45	5	45	5	5 stations	5 stations	10 stations	150	30	270
																25 marks	25 marks	50 marks			
III Population medicine & Reproduction	Endocrino-logy	25	25 +5	45	19	46	4	12	2	7	100	-								30	460
	Pop Med & Reproduction	25	25+5	45	19	46	4	12	2	7	100	Viva marks	Book marks	Viva marks	Book marks	10 stations	10 stations	20 stations	250		
												45	5	45	5	50 marks	50 marks	100 marks			
IV CNS & Psychiatry	Renal	25	25+5	45	19	46	4	12	2	7	100									30	460
	CNS & Psychiatry		25+5		19	46	4	12	2	7	100	Viva marks	Book marks	Viva marks	Book marks	10 OPSEs	10 OPSEs	20 OSPEs	250		
												45	5	45	5	50 marks	50 marks	100 marks			

***Spiral Integration**

1. Biomedical Ethics & Professionalism
2. Family Medicine
3. Integrated Undergraduate Research Curriculum (IUGRC)
4. Artificial Intelligence

**** "Log Book marks"** will be credited according to evidence of reading relevant subjects from the recommended books presented at the time of viva examination.

- In theory assessment SEQs and SAQs both tools may be used according to need and scope of assessment in the subject.
- **Time** allocated to 1 MCQ: 1min and 1SEQ/SAQ: 10min.

Proposed Pre-Annual Assessment TOS 4th Year MBBS (batch 50)

Blocks	Subjects	MCQs 1mark each	SAQs 5 marks each	Core Subject	Horizontal & Vertical Integration	Spiral Integration	OSCE 5 marks each	VIVA 75 marks	
								Attendance	Core subject
Block 1 * **	ENT	45	10	70%	20%	10%	10	5	40
	Community Medicine	30	5	70%	20%	10%	05	5	25
Total Marks		**75**	**75**	**100%**			**75**	**75**	
Block II* **	Eye	45	10	70%	20%	10%	10	5	40
	Community Medicine	30	5	70%	20%	10%	05	5	25
Total Marks		**75**	**75**	**100%**			**75**	**75**	
Block III * **	Pharmacology	25	4	70%	20%	10%	5	5	20
	Pathology	25	5	70%	20%	10%	5	5	20
	Community Medicine	15	4	70%	20%	10%	5	5	20
Total Marks		**75**	75	**100%**				75	
Block IV* **	Pharmacology	25	4	70%	20%	10%	5	5	20
	Pathology	25	5	70%	20%	10%	5	5	20
	Community Medicine	15	4	70%	20%	10%	5	5	20
Total Marks		**75**	**75**	**100%**			**75**	**75**	

****Total marks of each Block = 300 marks, Grand Total = 1200 marks**

Table of Specification (TOS) LMS Theme-1
MCQ Assessment of lectures and SDL
14 March 2026 (Saturday)
(80% pass criteria for appearing in end block exam - 80% attendance)

Sr. #	Discipline	No. of MCQs	No. of MCQs according to cognitive domain			Total marks
			C1	C2	C3	
1.	**Otorhinolaryngology**	30	05	20	05	30
2.	**Community Medicine**	15	05	08	02	15
3	**Dermatology**	05	02	02	01	05
		Total MCQs = 50	12	30	08	Total marks = 50

Table of Specifications (TOS) LMS Theme-2
Assessment of lectures and SDL
March 2026
(80% pass criteria for appearing in end block exam - 80% attendance)

Sr. #	Discipline	No. of MCQs	No. of MCQs according to cognitive domain			Total marks
			C1	C2	C3	
1.	**Otorhinolaryngology**	30	05	20	05	30
2.	**Community Medicine**	15	05	08	02	15
3	**Pathology**	02	01	01	00	02
4	**Obstetrics**	03	01	01	01	03
		Total MCQs = 50	12	30	08	Total marks = 50

Table of Specification (TOS) LMS Theme 3
LMS-MCQ Assessment of lectures and SDL
April,2026 (Saturday)
(80% pass criteria for appearing in end block exam - 80% attendance)

Sr. #	Discipline	No. of MCQs	No. of MCQs according to cognitive domain			Total
			C1	C2	C3	
1.	Otorhinolaryngology	30	05	20	05	30
2.	Community Medicine	15	06	07	02	15
3	Dermatology	05	02	02	01	05
		50	20	22	08	50 marks

End Module 1

Table of specifications (TOS) Fourth Year MBBS
Mar 2026
MCQ+EMQ+SEQ+SAQ+AV-OSPE (150 marks)
(80% pass criteria and 80% attendance for appearing in end block exam)

Sr. #	Discipline	No. of MCQs (1 mark each)	Cognitive domain			No of EMQs (5 marks each)	No. of SEQs (9 marks each)	Cognitive domain			No of SAQs (5 marks each)	Cognitive domain			Total
			C1	C2	C3	1 EMQs	5 SEQs	C1	C2	C3	3 SAQs	C1	C2	C3	
1.	Otorhinolaryngology	35 MCQ	15	15	05	1 x 5 = 5 marks	5x9 = 45	03	01	01	3 x5 = 15	01	01	01	
Theory (120 minutes)		35 marks 35 minutes				05 marks 05 minutes	45 marks 50 minutes				15 marks 30 minutes				Total = 100 Marks 120 minutes

AV-OSPE (10 stations) 60 minutes

	Discipline	No. of stations		Cognitive domain			Total marks
				C1	C2	C3	
1	Ear	02		-	01	01	2x5 = 10 marks
2	Nose	02		-	01	01	2x5 = 10 marks
3	Throat	02		-	01	01	2x5 = 10 marks
4	Audiometry Tympanometry	01 01		-	-	02	2x5 = 10 marks

5	Radiology Instrument	01 01		-	-	02	2x5 = 10 marks
							Total = 50 marks

Core subject	70%
Horizontal/vertical integration	20%
Spiral integration	10%

Table of Specification (TOS) LMS Theme 4
LMS-MCQ Assessment of lectures and SDL
April 2026 (Saturday)
(80% pass criteria for appearing in end block exam - 80% attendance)

Sr. #	Discipline	No. of MCQs	No. of MCQs according to cognitive domain			Total
			C1	C2	C3	
1.	**Otorhinolaryngology**	30	05	20	05	30
2.	**Community Medicine**	15	08	05	02	15
3	**Dermatology**	05	07	02	01	05
		50	37	15	08	50 marks

Table of Specification (TOS) LMS Theme 5
LMS-MCQ Assessment of lectures and SDL
April,2026 (Saturday)
(80% pass criteria for appearing in end block exam - 80% attendance)

Sr. #	Discipline	No. of MCQs	No. of MCQs according to cognitive domain			Total
			C1	C2	C3	
1.	Otorhinolaryngology	30	05	20	05	30
2.	Community Medicine	15	06	07	02	15
3	Dermatology	05	02	02	01	05
		50	20	22	08	50 marks

End Module-2 (Block-1) Otorhinolaryngology
Table of specifications (TOS) Fourth Year MBBS 2026
MCQ+EMQ+SEQ+SAQ+AV-OSPE (150 marks)
(80% pass criteria and 80% attendance for appearing in end block exam)

Sr. #	Discipline	No. of MCQs (1 mark each)	Cognitive domain			No of EMQs (5 marks each)	No. of SEQs (9 marks each)	Cognitive domain			No of SAQs (5 marks each)	Cognitive domain			Total
			C1	C2	C3	1 EMQs	5 SEQs	C1	C2	C3	3 SAQs	C1	C2	C3	
1.	Otorhinolaryngology	35 MCQ	25	05	05	1 x 5 = 5 marks	5x9 = 45	03	01	01	3 x5 = 15	---	01	01	
Theory (120 minutes)		35 marks 35 minutes				05 marks 05 minutes	45 marks 50 minutes				15 marks 30 minutes				Total = 100 marks 120 minutes
AV-OSPE (10 stations) 60 minutes															
	Discipline	No. of stations					Cognitive domain					Total marks			
							C1	C2	C3						
1	Ear	02					-	01	01			2x5 = 10 marks			
2	Nose	02					-	01	01			2x5 = 10 marks			
3	Throat	02					-	01	01			2x5 = 10 marks			
4	Audiometry Tympanometry	01 01					-	-	02			2x5 = 10 marks			
5	Radiology	02					-	-	02			2x5 = 10 marks			
												Total = 50 marks			

Core subject	**70%**
Horizontal/vertical integration	**20%**
Spiral integration	**10%**

This plan of assessment intricately details the structure and evaluation criteria for the undergraduate otorhinolaryngology block exam, designed to align closely with the Accreditation Council for Graduate Medical Education (ACGME) competencies. The block unfolds across two distinct three-weeks modules, with weekly formative assessments strategically integrated to assess and reinforce students' proficiency in the ACGME-defined domains along with special emphasis on research as per university policy.

ACGME competencies	Assessment tool
Medical Knowledge	MCQ, SAQ, OSCE, ward test
Patient care	OSCE, Ward test
Practice- based learning	OSCE, ward test
System based practice	OSCE, ward test
Professionalism	OSCE, ward test
Communication skills	OSCE, ward test
Research	Spirally integrated across all 5 years Research projects

Each formative assessment serves as a targeted gauge for students to showcase their evolving competencies, embracing the ACGME's focus on patient care, medical knowledge, practice-based learning, interpersonal and communication skills, professionalism, and systems-based practice. As the modules progress, these assessments provide iterative insights into learners' development across these crucial competencies.

The culmination of each module manifests in a summative assessment, meticulously crafted to evaluate the synthesis and application of knowledge within the context of the ACGME competencies. This comprehensive approach ensures that the evaluation process not only measures academic understanding but also holistically assesses the skills and attributes essential for effective and compassionate medical practice.

In essence, this table of specifications serves as a dynamic framework for instructors, weaving ACGME competencies into the fabric of assessments to cultivate well-rounded, future-ready healthcare professionals. It underscores the commitment to nurturing individuals who excel not only in the theoretical aspects of otorhinolaryngology but also in the broader spectrum of competencies vital for patient-centered care.

Block Assessment Plan

University has followed the guidelines of Pakistan Medical and Dental Council for assessment. Assessment is conducted at the mid modular, modular and block levels.

1. Formative Assessment

Assessment Method	Description	Timing
End of Lecture Assessment	Brief quizzes or concept checks to assess understanding after each lecture	End of each lecture
Weekly Quizzes	LMS based Short quizzes covering weekly topics	End of each weeks
TCRF	Discussions involving clinical scenarios to assess clinical reasoning and decision making.	Once a week

2. Summative Assessment:

Summative assessment is taken at the

- End module-I and End module -II
- End block levels.

Assessment framework is specifically designed with careful consideration of subject importance and integration aspects. The distribution of marks is as follows

1	**Core concepts**	**70%**
2	Horizontal/ Vertical integration ● Pathology ● Community medicine/ public health ● Pharmacology Vertical integration ● Family medicine ● General surgery ● Basic sciences	15%
3	Spiral integration ● Research ● Artificial intelligence ● Bioethics	15%

This structure emphasizes a significant focus on core subjects, ensuring a substantial grasp of fundamental concepts. Simultaneously, horizontal, vertical, and spirally integrated subjects each contribute to 10% of the assessment, promoting a balanced understanding and application of knowledge across interconnected domains. The tabulated form provides a clear delineation of weightage assigned to each component, reflecting the comprehensive nature of the assessment strategy.

Department of Otorhinolaryngology Head and Neck Surgery (CIA)

Module 1:

Roll no.	Name of student	Theory Marks	AV-OSPE Marks	Total Marks	Theory CIA	AV-OSPE CIA	TOTAL CIA
		100	50	150	12	3	15

Module 2:

Roll no.	Name of student	Theory Marks	AV-OSPE Marks	Total Marks	Theory CIA	AV-OSPE CIA	TOTAL CIA
		100	50	150	13	2	15

LMS off campus: (10%)

Roll no.	Name of student	Theory Marks (40%)	Clinical (60%)	TOTAL
		08	12	20

LMS On Campus:

Total Theory	Total Clinical
30	**30**

Block 1: (15%):

Roll No	Name of student	LMS (on campus) Marks	Ci-OSCE + OSVE Marks	Total Marks	LMS CIA	Ci-OSCE+OSVE Marks	Clinical Clerkship		Total CIA
		60	**200**	**260**	**5**	**10**	**Assessment = 10**	**Logbook = 5**	**30**

Summary Block-1 CIA: (40%)

Module-1	**Module 2**	**Block-1**	**LMS(off campus)**	**TOTAL**
15	**15**	**30**	**20**	**80**

Section – V Time Table

RMU-12 Integrated Modular Curriculum
4th year MBBS

Session – 2026
Batch 50

Block Name: : **Otorhinolaryngology Block-X 2026**

Duration of Module : **06 Weeks**

Coordinator : **Dr. Ashar Alamgir**

Module Committee		**Module task force**		
Vice Chancellor RMU	Prof. Dr. Muhammad Umar	Coordinator	Dr Ashar Alamgir	
		Co- Coordinator	Dr Farhat/Dr Namra/Dr Maimona	
Director DME	Prof. Dr. Rai Muhammad Asghar	DME Focal Person	Dr. Sidra Hamid	
Convener Curriculum	Prof. Dr. Naeem Akhter	Co-coordinator Comm Med	Dr. Mehwish Riaz	
Chairperson Otorhinolaryngology	Prof Dr Sadia Chaudhry			
Additional Director DME	Prof. Dr. Ifra Saeed			
Chairperson Physiology	Prof. Dr. Samia Sarwar			
Chairperson Biochemistry	Dr. Aneela Jamil	**DME Implementation Team**		
HOD Community Medicine	Prof Dr Rozina Shahadat Khan	Director DME		Dr. Rai Muhammad Asghar
Focal Person ENT 4th Year MBBS	Dr Huma	Implementation In charge 4th Year MBBS		Prof. Dr. Arshad Ali Sabir
Focal Person Comm Med	Dr. Sana Bilal	Deputy Director DME		Dr. Shazia Zeb

Categorization of Modular Content of Otorhinolaryngology		
Category A By Professors	**Category B By Associate & Assistant Professor**	**Category C By Senior Registrars**
Endoscopic anatomy of middle ear	Anatomy and physiology of ear and vestibular system	Chronic Otitis media
Acute otitis media	Acute Otitis externa & Malignant Otitis externa	Snoring and Sleep Apnoea
Otitis media with effusion (OME)	Nasal polyps, Eustachian tube catarrh	Vasomotor Rhinitis and its differentials
Acute ethmoiditis and its complications	Facial nerve palsy	Pure tone audiometry, Tympanometry and BERA/ASSR
Acute epiglottitis	Otosclerosis	Hearing Aids, Cochlear implant
Laryngotracheobronchitis	Sensorineural hearing loss, noise induced hearing loss, drug induced HL, Meniere's	Adenoiditis, Nasopharyngeal Angiofibroma
Foreign body ear, nose	Acute epiglottitis, Acute laryngotracheobronchitis	Allergic rhinitis
Rhinolith	Complications of Chronic Otitis media	Radiology of nose and paranasal sinuses
Atrophic rhinitis	Diseases of salivary glands	Anatomy and physiology of oral cavity, pharynx
Hypertrophic rhinitis	Deviated nasal septum & Rhinoplasty	Septal abscess & septal hematoma
	Complications of rhinosinusitis	Basal cell carcinoma &Squamous cell carcinoma Nose
	Acute and chronic tonsillitis, peritonsillar abscess, retropharyngeal abscess, parapharyngeal abscess	Anatomy and physiology of larynx, trachea, bronchi
	Vocal nodule, vocal polyp, Reinke's edema	Ludwig's angina

Categorization of Modular Content of Community Medicine

Category A*	Category B**	Category C***		
LGIS	LGIS	SDGS	SDL	IUGRC sessions (PAL)
Epidemiology Fundamental concepts	Concept of disease & health	Measures of morbidity & exercise of morbidity statists	COVID 19	Review of health research methodology
Quantification of ill health & death	Concept of disease causation		influenza	Selection of research title (Finer Criteria) & literature review
Epidemiological Study designs	Levels of prevention	Measures of mortality & exercise of morality statists	Infectious disease epidemiology	Finalization of questionnaire and layout of work plan
Measure of association in epidemiological data analysis	Droplet infections		Investigation of epidemic	
Epidemiological investigation	Health dimensions & indicators		Exercise of Investigation of epidemics	
Disease Causation & association concepts	Epidemiology of Communicable diseases			
Overview of Health research methods	Air & ventilation			
Research Sampling techniques	Noise			
	Global warming			

Category A*: Fundamental & Complex Concepts taken by Professors, Associate Professors and Assistant Professors
Category B: Intermediate concepts. Exercises. By Professorial faculty and Senior Demonstrators/ subject specialists.**
Category C*: Relatively lower complex concepts, exercises/ applications. By Assistant professors, Demonstrators & senior PGTs)**

Teaching Staff / Human Resource of Department of Otorhinolaryngology

Sr. #	Designation Of Teaching Staff / Human Resource	Total number of teaching staff	Total teaching hours
1.	**Professor**	**01**	**20 hours**
2.	**Associate professors**	**01**	**32 hours**
3.	**Assistant professors**	**04**	**32 hours**
4.	**Senior Registrars**	**06**	**42 hours**
			126 hours

Teaching Staff / Human Resource of Department of Community Medicine

Sr.no.	Designation	Total number of teaching staff
1.	**Professor**	**01**
2.	**Associate professor**	**01**
3.	**Assistant professor**	**04**
4.	**Demonstrators**	**02**
5.	**PGTs**	**10**

Contact Hours (Faculty) ENT

Sr. #	Hours Calculation for Various Type of Teaching Strategies	Total hours
1.	**Large Group Interactive Session (LGIS)**	**6 hours x 5 weeks = 30 hours**
2.	**Clinical Clerkship**	**4 hours x 6 weeks = 24 hours**
3.	**Case Based Learning (CBD)**	**4 hours x 6 weeks = 24 hours**
4.	**Operation theatre**	**8 hours x 6 weeks = 48 hours**
		126 hours

Contact Hours (Faculty) Community Medicine

Sr. no.	Hours Calculation for Various Type of Teaching Strategies	Total Hours (Faculty)	Total Hours (Students)	Faculty level
1	**LGIS (19). 1hrs each session (half class sessions)**	**2 x 19= 38 hrs.**	**19**	**Professor, Associate, and assistant professors**
2	**SGD (2) approx. 2hrs each session. 1/4th class**	**2 x 8= 16 hrs.**	**4**	**Demonstrator (subject specialists), Senior PGTs**
3	**PAL (IUGRC) (1) approx. 2hrs per session. (16 small group sessions. 8 gps. per day)**	**2 x 16 =32 hrs.**	**2**	**Demonstrator (subject specialists) supervised by professional faculties**
4	**SDL (4)**	**1 x 4 =4 hrs.**	**4**	**Demonstrator (subject specialists)**
		Total: 90hrs	**29hrs**	

ENT (Otorhinolaryngology)
Block-X
Module-I
3 weeks

ENT (Otorhinolaryngology)

Module-1

Theme-1

Otalgia, otorrhea, dizziness, Hearing loss

Block-X Module-1

RAWALPINDI MEDICAL UNIVERSITY RAWALPINDI NEW TEACHING BLOCK
TENTATIVE TIME TABLE 4th YEAR MBBS – OTORHINOLARYNGOLOGY MODULE-1- 2026

Week - 1

DATE / DAY	8:00 AM – 8:45 AM	08:45am – 9:30am	BREAK 10:00AM – 10:30AM	10:am – 11:30am	11:30am - 1:00pm
Monday 09-03-26	**ENT LGIS** Introduction to subject, Anatomy and physiology of ear, Ext Ear inflammatory conditions Dr Shafaq/Dr Fatima Shahid Lec hall 1 & 2	**COMMUNITY MEDICINE LGIS** Introduction to community medicine & Public health Prof Dr Rozina Shahadat Khan CPC Hall		**Clinical Clerkship** Discuss anatomy & physiology of ear and vestibular system in ENT wards class room	**Case based discussion** Ear history and examination in ENT wards on patients
Tuesday 10-03-26	**ENT LGIS** Acute Otitis media Otitis media with effusion Dr Maimona/Dr Namra Lec hall 1& 2	**COMMUNITY MEDICINE LGIS** Fundamental concepts of preventive medicine,(health and disease) Prof Dr Rozina Shahadat Khan, Dr Afifa Kulsoom Lec hall 1& 2		**Clinical Clerkship** Discuss acute otitis externa Malignant otitis externa and foreign bodies ear in ENT ward class room	**Case based discussion** History and examination of Acute otitis externa Malignant otitis externa patients in ENT ward along with management of FB ear
Wednesday 11-03-26	**ENT LGIS** Menier's dis., BPPV Dr Maimoona/Dr Sundas Lec hall 1& 2	**PHARMACOLOGY LGIS-1** Antihistamines In ENT Dr Maimoona / Dr Saba Lec hall 1 & 2		**Clinical Clerkship** Discuss otitis media with effusion,CSOM Eustachian catarrh in ENT ward class room	**Case based discussion** Demonstration of Myringotomy with grommet insertion,Myringoplasty and Mastoidectomy in Operation Theatre
Thursday 12-03-26	**ENT LGIS** Sensorineural, noise induced, drug induced hearing loss/Tympanometry Audiology, Dr Haitham/Dr Tabasum Lec hall 1& 2	**COMMUNITY MEDICINE LGIS** Concepts of wellbeing , health indicators Prof Dr Rozina Shahadat Khan Dr Imrana Saeed Lec hall 1& 2		**Clinical Clerkship** Discuss PTA and Tympanographs	**Case based discussion** Interpretation of audiological tests of patients with hearing loss

	08:00AM – 09:30AM	09:30AM – 10:15 am		10:15AM – 11:00AM		11:00AM – 12:00PM	ENT-SDL
Friday 13-03-26	PAL / Skill lab Community medicine / Pharmacology IUGRC Contact session 1/ Overview to health research methodology (BatchA-H) Prof .Dr Rozina Shahdat Khan . Effect of histamine and anti histamine on rabbit's ileum (batch I-P) Dr Uzma / Dr Arsheen	ENT **LGIS** Chronic Otitis media with complications Prof Dr Sadia Lec hall 4 Odd	Chronic Otitis Media with complications Dr Ashar Lec hall 5 Even	**COMMUNITY MEDICINE LGIS** Concept of prevention & mode of intervention Prof Dr Rozina Shahadat Khan Dr Imrana Saeed Lec hall 4 Odd	Lec hall 5 Even	ENT-LGIS Facial nerve and its disorders Dr Fatima / Dr Namra Lec hall 4 & 5	Anatomy/Radiology of temporal bone and mastoid x ray mastoid, CT scan temporal bone, MRI temporal bone Dr Shafaq

	08:00AM – 09:30AM	09:30AM – 11:00 AM		BREAK 11;15 AM-11:45 AM	11:00AM – 11:40AM	11:40 am – 12:20PM	12:20 PM – 1:00PM
Saturday 14-03-26	PAL / Skill lab Community medicine / Pharmacology IUGRC Contact session 1/	**Transdisciplinary Clinical Reasoning Forum (TCRF)** A female diabetic patient with otalgia, ear discharge Dr Farhat Lecture Hall 4	A female diabetic patient with otalgia, ear discharge Dr Zainab Lecture Hall 5		ENT **LGIS** Otosclerosis Lect Hall 4 & 5 Dr Zainub/Dr Farhat	Pathology **LGIS 1** Cysts, polyp, cholesteatoma and neoplastic lesions of ENT Dr Abid / Dr Mudassira Lec Hall 4 & 5	**COMMUNITY MEDICINE LGIS** Hearing loss due to noise pollution Prof Dr Rozina Shahadat Khan

	Overview to health research methodology Prof .Dr Rozina Shahdat Khan Effect of histamine and anti histamine on rabbit's ileum Dr Uzma / Dr Arsheen	Odd	Even				Dr Mehjabeen

LMS-1
Theme-1

ENT (Otorhinolaryngology)

Module-1

Theme-2

Rhinorrhoea, nasal obstruction

Block-X Module-1

RAWALPINDI MEDICAL UNIVERSITY RAWALPINDI NEW TEACHING BLOCK

Week - 2

TENTATIVE TIME TABLE 4th YEAR MBBS – OTORHINOLARYNGOLOGY MODULE-1- 2026

DATE / DAY	8:00 AM – 8:45 AM	08:45am – 09:30am		10:00am – 11:30pm	12:00pm -1:00pm
Monday 16-03-26	**DERMATOLOGY LGIS** Approach to a patient with Psoriasis Dr Shahwana Lec hall 4 & 5	**COMMUNITY MEDICINE LGIS** Fundamental Concepts & Uses of Epidemiology (Assoc Prof) Dr Khola Noreen, (Assoc Prof) Dr Sana Bilal. Lec hall 1,2		**Clinical Clerkship** History taking of patients with nose and PNS diseases	**Case based discussion** Examination of Nose and PNS on patients
Tuesday 17-03-26	**ENT LGIS** Nasal septum, Septal haematoma, abscess, perforation, foreign body nose Dr Haitham/Dr Zainab Lec hall 1 & 2	**COMMUNITY MEDICINE LGIS** Introduction to Epidemiologic methods-Descriptive studies Assoc Prof Dr Khola / Assoc Prof Dr Sana Bilal Lect Hall 1 & 2	**N O B R E A K**	**Clinical Clerkship** Discuss types of DNS and Septoplasty	**Case based discussion** Examination of nose for DNS and demonstration of septoplasty in Operation theatre
Wednesday 18-03-26	ENT **LGIS** Nasopharyngeal Angiofibroma, Nasal polyp, FESS Dr Sundas, Dr Fatima Shahid Lec Hall 4,5	**COMMUNITY MEDICINE LGIS** Droplet infections1-small pox,chicken pox,measles Dr Narjis, Dr Asif Lect Hall 1&2		**Clinical Clerkship** Discuss foreign body nose and rhinolith	**Case based discussion** Demonstration of foreign body nose and rhinolith removal
Thursday 19-03-26	EID HOLIDAYS				
Friday 20-03-26					
Saturday 21-03-26	PAL / Skill lab	**Transdisciplinary Clinical Reasoning Forum (TCRF)**	11:15-11:45	COMMUNITY MEDICINE **LGIS**	**DERMATOLOGY LGIS** / **Family Medicine**

LMS-2
Theme-2

ENT (Otorhinolaryngology)

Module-1

Theme-3

Sore throat

RAWALPINDI MEDICAL UNIVERSITY RAWALPINDI NEW TEACHING BLOCK

Block-X Module-1

TENTATIVE TIME TABLE 4th YEAR MBBS – OTORHINOLARYNGOLOGY MODULE-1- 2026

Week - 3

PAKISTAN DAY

8th International Scientific Conference

DATE / DA								
Monda 23-03-2								vity
Tuesday 24-03-26								
Wednesday 25-03-26								
Tursday 26-03-26								
Friday 27-03-26								
		Odd	Even	Odd	Even			
Saturday 28-03-26	08:00AM – 09:45AM		10:00AM – 12:00 PM			N O B R	12:00PM – 01:00PM	
	SGD / Skill lab		Transdisciplinary Clinical Reasoning Forum (TCRF)				COMMUNI TY	ENT-SDL

LMS-3
Theme-3

ENT (Otorhinolaryngology)

Module-2

Theme-4

Hoarseness, dysphagia

Block-X Module-2

RAWALPINDI MEDICAL UNIVERSITY RAWALPI

Week - 4

TENTATIVE TIME TABLE 4th YEAR MBBS – OTORHINOLARYNGOLOGY MODULE-2- 2026

DATE / DAY	8:00 AM – 9:00 AM	09:00AM – 10:00AM.		10:30AM – 11:30AM	11.30 AM - 02 PM
Monday 30-03-26	**COMMUNITY MEDICINE LGIS**	**ENT LGIS**	BREAK	**Clinical Clerkship**	**Case based discussion**
	END OF MODULE-1 MCQ+SEQ+SAQ+EMQ+AV-OSPE			Discuss anatomy of larynx, trachea, bronchi and esophagus in ENT wards	History taking, examination of larynx, trachea in ENT wards on patients
Tuesday 31-03-26	**ENT LGIS**	**COMMUNITY MEDICINE LGIS**		**Clinical Clerkship**	**Case based discussion**
	Acute and Chronic Tonsillitis, Adenoiditis Dr Namra Dr Shafaq Lec hall 4	Analytical epidemiological studies (cohort studies) Dr Khola, Dr Sana Bilal Lec hall 1 & 2		History taking and Examine patient with hoarseness	Demonstrate tracheostomy in operation theatre
Wednesday 01-04-26	**ENT LGIS**	**COMMUNITY MEDICINE LGIS**		**Clinical Clerkship**	**Case based discussion**
	Quinsy, Retropharyngeal abscess, parapharyngeal abscess Foreign body aerodigestive tract Lec hall 1 & 2 Dr Zainab/Dr Maimona	Experimental study design Dr Khola, Dr Sana Bilal Lec hall 1 & 2		Discuss causes of stridor and management	Demonstration of FODL in operation theatre
Thursday 02-04-26	**ENT LGIS**	**COMMUNITY MEDICINE DSL**		**Clinical Clerkship**	**Case based discussion**
	Vocal nodule, vocal polyp, Rienke's edema Laryngomalacia/ Juvenile laryngeal papillomatosis Dr Fatima/Dr Tabassum Lec hall 1 & 2	Association & Causation Dr Khola, Dr Sana Bilal Lec hall 1 & 2		History taking and examination of patient with dysphagia	Demonstrate esophagoscopy and bronchoscopy in operation theatre

	08:00AM – 10:00AM	10AM – 10:40AM		10:40AM – 1120AM	11:20AM – 12:00PM	
Friday 03-04-26	**PAL / Skill lab**	**ENT LGIS**		**COMMUNITY MEDICINE LGIS**	**ENT LGIS**	**Self Study**
	Community medicine / Pathology IUGRC Contact session III discussion on synopsis writing protocols all faculty of community medicine Neoplastic lesions of nasopharynx	Plummer Vinson Syndrome, Croup, ALTB Dr Ashar Lec hall 4	Plummer Vinson Syndrome, Croup, ALTB Prof Dr Sadia Lec hall 5	Air and ventilation Dr Mehjabeen (Senior Demo),Dr Asif (Demo), Lec hall 4, 5	Tracheostomy and complications Dr Maimona/Dr Shafaq Lec hall 4 & 5	Anatomy and physiology of larynx, trachea, esophagus

	08:00AM – 10AM	10:00AM – 12:00PM			12:30PM – 01:15PM	01:15-2:00PM
Saturday 04-04-26	**PAL / Skill lab**	**Transdisciplinary Clinical Reasoning Forum (TCRF)**		BREAK	**DERMATOLOGY LGIS**	**ENT-SDL**
	Community medicine / Pathology IUGRC Contact session III discussion on synopsis writing protocols all faculty of community medicine	An old age man with hoarseness of voice and difficulty in breathing Dr Fatima Dr Shafaq CPC Hall			Approach to a patient with Bacterial skin infections and scabies Dr Shahwana Lec hall 4 & 5	Vocal cord paralysis, vocal nodules, Radiology of neck and aerodigestive tract **Dr Fatima/Dr Farhat**

LMS-4
Theme-4

ENT (Otorhinolaryngology)

Module-2

Theme-5

Neck Masses

Block-X Module-2

RAWALPINDI MEDICAL UNIVERSITY RAWALPINDI NEW TEACHING BLOCK

Week - 5

TENTATIVE TIME TABLE 4th YEAR MBBS – OTORHINOLARYNGOLOGY MODULE-2- 2026

DATE / DAY	8:00 AM – 9:00 AM	09:00AM – 10:00AM		10:30AM – 11:30AM	11:30AM - 02:00 PM
Monday 06-04-26	COMMUNITY MEDICINE **LGIS** Environment and health (Air Purification Global Warming) Dr Asif, Dr Narjis Lec Hall 1,2	**DERMATOLOGY LGIS** An approach to a patient with cutaneous drug reactions Dr Shawana Lec Hall 1 & 2	**B R E A K**	**Clinical Clerkship** **History taking of a patient with neck swelling**	**CBD** **Examination of patient with neck swelling**
Tuesday 07-04-26	**ENT LGIS** Cervical Lymphadenopathy Dr Sundas/Dr Zainab Lec hall 1 & 2	**ENT LGIS** Anatomy and physiology of neck, Thyroid Gland Lec hall 1 & 2 Prof Dr Sadia Ch/Dr Farhat		**Clinical Clerkship** **Discuss CT scan Neck**	**CBD** **Examination of cervical lymph nodes**
Wednesday 08-04-26	**ENT LGIS** Thyroglossal duct cyst, Goitre Dr Farhat/Dr Fatima Lec hall 1 & 2	COMMUNITY MEDICINE **LGIS** Probability sampling, Dr Afifa,Dr Mehwish Lec Hall 1,2		**Clinical Clerkship** **Discuss Differential diagnosis of neck masses**	**CBD** **Demonstrate Lymph node biopsy in operation theatre**
Thursday 09-04-26	**ENT LGIS** Branchial Cyst/Branchial fistula Dr Namra/Dr Maimona Lec hall 1 & 2	COMMUNITY MEDICINE **LGIS** Non Probability sampling, Dr Afifa,Dr Mehwish Lec Hall 1,2		**Clinical Clerkship** **History of a patient with thyroid swelling**	**CBD** **Examination of patient with thyroid swelling**

	08:00AM – 10:00AM	10:00AM – 10:40AM	10:40AM – 11:20AM		11:20AM – 12:00PM	
Friday 10-04-26	**SGD / Skill lab** Community medicine / Pathology Measurement of Mortality Dr Narjis, Dr Maria, Dr Mehreen A-H)	**ENT LGIS** Radiology in ENT Dr Ashar, Dr Farhat Lec hall 4,5	**DERMATOLOGY LGIS** Approach to a patient with Fungal viral skin infection Dr Shahwana Lec hall 4 **Odd**	Approach to a patient with Fungal viral skin infection Dr Shahwana Lec hall 4 **Even**	**ENT LGIS** Ludwig's angina Dr Shafaq/Dr Tabasum Lec hall 4 & 5	**Self Study** Discuss anatomy and physiology of neck

	08:00AM – 10:00AM	10:00AM – 12:00PM		12:30PM – 01:15PM	1:15-2:00PM
Saturday 11-04-26	**SGD / Skill lab** Community medicine / Pathology Measurement of Mortality Dr Narjis, Dr Maria, Dr Mehreen (Batch I-P)	**Transdisciplinary Clinical Reasoning Forum (TCRF)** A child with fever, neck swelling, difficulty in breathing Dr Maimoona Dr Namra CPC Hall	**B R E A K**	**DERMATOLOGY LGIS** Approach to a patient with Acne and melasma Dr Shahwana Lec hall 4 & 5	**ENT-SDL** Discuss Cystic hygroma and carotid body tumor **Dr Namra** **Dr Zainab**

LMS-5
Theme-5

End Module 2

Block-X Module-2 **Week - 6**

RAWALPINDI MEDICAL UNIVERSITY RAWALPINDI NEW TEACHING BLOCK
TENTATIVE TIME TABLE 4th YEAR MBBS – OTORHINOLARYNGOLOGY MODULE-2- 2026

DATE / DAY				
Monday 13-04-26	**End Module-2 – Theory MCQ+EMQ+SEQ+SAQ 08.30 am to 11.30 am AV OSPE – 11.30 am to 01 pm**			
Tuesday 14-04-26	**Community Medicine Theory and AV-OSPE**			
Wednesday 15-04-26	----			
Thursday 16-04-26	----			
Friday 17-04-26	----			
Saturday 18-04-26	----			

Program Evaluation and Feedback

Quality Assurance & Quality Enhancement

- Student Feedback Performa
- Student Report
- Faculty Report
- SWOT Analysis
- Quality Enhancement Cell (QEC) Report

Figure 31 – RMU Quality Assurance Cycle

Feedback & Evaluation

Rawalpindi Medical University is dedicated to advancing equality, diversity, and inclusion across all its activities, processes, and cultural practices, in line with its Public Sector EqualityDuties. This commitment encompasses promoting equality and diversity for everyone, regardless of any protected characteristic, working pattern, family circumstance, socio-economicbackground, political belief, or any other irrelevant distinction. Where pertinent to the policy, decision-making panels will ensure a reasonable gender balance (with at least one man and one woman) and will actively consider the representation of other protected groups.

Principles Feedback from students is essential to inform the development of the University'sprogrammes and to help shape all aspects of their current and future learning and broader experience. The University actively seeks and encourages students to share their views. Our approach aims to create openness, responsiveness and a sense of partnership.

How feedback is received

- **Informal Feedback**

Informal feedback is received by day-to-day dialogue between students and staff,

- **Formal Feedback**

Feedback is received from students in more formal settings. These include:

- **Central survey campaign**

The University regularly invites students to participate in anonymous surveys (Appendix 1).

The central surveys take place after every module, after every Block and at the end of the academic year. This schedule enables the University to work in conjunction with thestudents and help to improve the teaching, learning and assessment methodologies.

- **Focus Group Discussion**
  - **One To One Feedback from Students**

Figure 32 – RMU Feedback framework

Appendix -I Student Feedback Proforma for 2024

(to be conducted after every module completion)

Module Content & Organization

Questionnaire	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
The module objectives were informed.					
At the beginning of module study guide was available.					
The module workload was manageable.					
The pace of the module was manageable.					
The module was well organized.					
Module started and ended on time.					
End of block feedback was taken					

Learning Environment and Teaching Methods

Questionnaire	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Lectures were delivered appropriately.					
Labs were conducted appropriately.					
Small group discussions were conducted appropriately					
Teaching sessions were as per schedule.					
CBLs were conducted appropriately					
Faculty was cooperative.					
Learning resources were communicated clearly					
SGDs were standardized between different batches					

Quality of Delivery

Questionnaire	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
The module stimulated my interest.					
Ideas were presented clearly.					

Learning Resources

Questionnaire	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Learning Material was provided /recommended.					
Learning Resources were available in thelibrary.					
Digital / Web Based resources wereavailable.					
Power points of lectures were available					

Student Contribution

Questionnaire	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
I participated actively in the module.					
I believe I have made progress in thismodule.					

Assessments

Questionnaire	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Class tests were conducted regularly.					
Class tests were helpful					
Test difficulty was appropriate.					
Written Assessment was as per Table ofSpecifications.					
OSPE Exam was as per Table ofSpecification					
Table of Specification was shared					

LMS and its working

Questionnaire	Strongly Agree	Agree	Uncertain	Disagree	Strongly Disagree
Easy Access to LMS					
Module Content was Available					

SWOT Analysis of Curriculum

SOWT Analysis of Implementation of IMC

- **Strength**
  - We are leading all public sector medical colleges in implementation of integrated modular curriculum
  - We are fulfilling the requirement of World Federation for Medical Education
  - Our future doctor will be able to correlate and integrate basic and clinical knowledge in a better way with the competencies of 7 Star Doctor-acting as leader, manager, decision make, and communicator and care provider, decision maker, researcher and lifelong learner.

- **Opportunities**
  - We have completed the phase –I of implementation for 1st ,2nd and 3rd year and we are now able to implement it in 4th and final year
  - We can further refine our integrated curriculum of 1st and 2nd year MBBS in coming years and can better tackle its flaws.
  - Proper committees for feedback and evaluation are developed with collaboration from QEC& DME.

- **Weaknesses**
    - A change in system is always difficult to be accepted by stakeholders
    - Inflexible as compared to Conventional System.
    - The content of different subjects is sometimes jumbled up in various modules according to the requirement of that specific module which is difficult to be absorbed by the students.
- **Threats**
    - The Modular System can totally collapse back to Conventional System if not vigilantly and expertly handled.

Figure 33 : Centres for Disease Control and Prevention. Framework for program evaluation in public health. MMWR 1999;48 (No. RR-11)

Quality Enhancement Cell (QEC) Report

Quality Enhancement Cell- RMU since its inception has been active in promoting its core function of bringing standardization to university's academic programs in line with the guidelines enunciated by the Higher Education Commission. In this regard, first thing on which QEC team focused was QEC guidelines. Team achieved that milestone in record time. Approved QEC guidelines of RMU were implemented in 2018. Quality Enhancement Cells serve as focal points for quality assurance in the institutions in order to improve and uphold the quality of higher education. Capacity building of academia in quality assurance is one of the key functions of Quality Assurance Agency (QAA), HEC and subsequently of QEC. Thus, QAA and QECs of the Universities work hand in hand to move in this direction of capacity building arrangements that include awareness campaigns, development of quality assurance policy instruments, training to learn the processes and procedures of quality assurance in higher education institutions and development of Manual to equip the practitioners of quality assurance.In recent years it has become an obligation that institutions of higher education demonstrate the effectiveness of their academic programs in providing high quality education that positively impacts students. Furthermore, most accrediting bodies and others concerned with quality assurance are requesting that institutions assess students learning outcomes as a means of improving academic programs. This has led the accrediting bodies to develop methods for assessing the quality of academic programs. So, whole conventional system was needed to be revamped. Rawalpindi Medical University has the honor of being the first public sector Medical University of Punjab which has introduced the modern modular system of medical education for the MBBS course. It was a big challenge for Department of Medical Education (DME) and Quality Enhancement Cell to maintain the quality and standards of all the teaching and training practices. Quality enhancement cell, RMU appreciate the untiring efforts of DME in this regard. DME team has worked day and night for the implementation of the integrated modular curriculum.

Following are the compliments and recommendations by the Quality Enhancement Cell, RMU:

Commendations:

1. Proper, well managed integrated modular curriculum is in place under the vibrant and energetic leadership of Vice Chancellor, Prof. Muhammad Umar and Department of Medical Education. This thing has also been acknowledged by different visits by accreditation bodies like Higher Education Commission (HEC) and Pakistan Medical & Dental Commission.
2. Proper curriculum committee is in place with appropriate representation of the students as members.
3. All stakeholders are on board and are on one page regarding implementation of the integrated modular curriculum.
4. Regular meetings have been done by the curriculum committee.
5. Feedback has been taken regularly with appropriate gap interval in between.
6. Proper record keeping has been done by the Department of Medical Education both in soft and hard form.
7. As far as the assessment is concerned, newly established Examination Department is doing commendable and admirable job.

8. Final results are indicating that both students and faculty has adapted well to integrated modular system and they are satisfied with the system.
9. Campus management system is working efficiently.
10. Standardized format of all teaching strategies has improved the quality of the deliverance of the subject matter.

Recommendations:

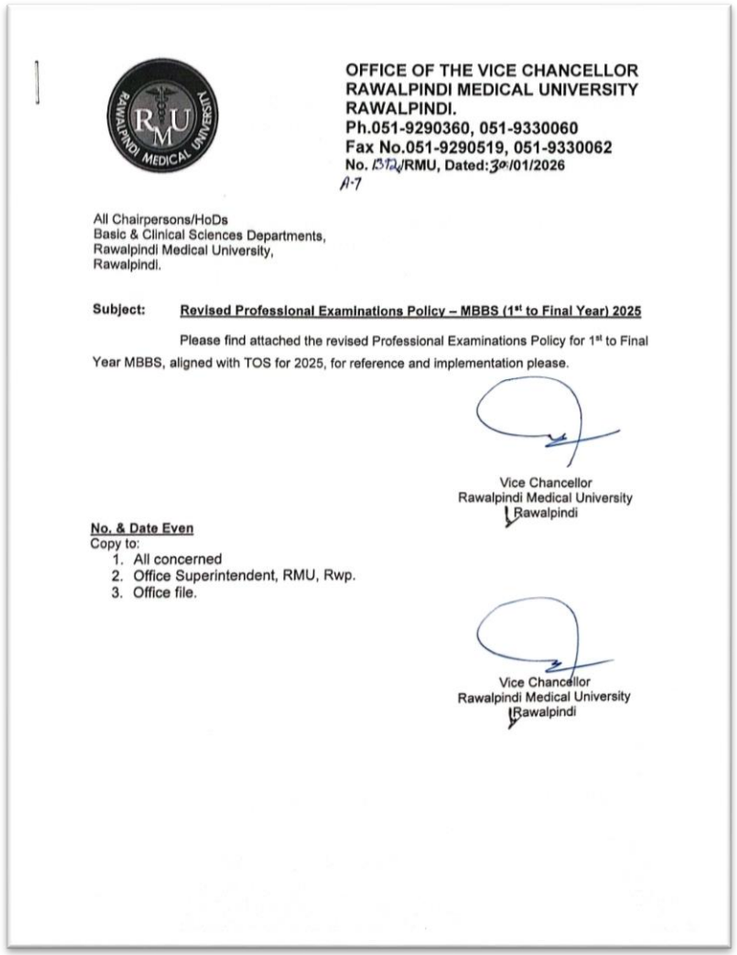
1. Communication and coordination among the departments can be made better. This will help in normalizing the pressure on the Department of Medical Education.
2. Department of Medical Education should be equipped with more human resource.
3. Faculty members should be provided with more opportunities for updating themselves with modern teaching methodologies. They should be encouraged to have certification or masters in medical education.
4. Departments and DME should ensure equal distribution of responsibilities among faculty members.
5. Steps should be taken in account for improving the ladder of the curriculum according to the Harden's ladder of curriculum.
6. Faculty should be encoouraged to participate actively in the Faculty Development Program of the university which is already working on a very good pace.
7. Subjects specialists are advised to have more frequent meetings with the aim of improving the quality of the content delivered to the students.
8. Student centered teaching should be encouraged more.
9. Any motivational lecture should be included in the time table for every class as it is very important for the students for personal growth and development.

The weightage of all clinical lectures should be increased in first and second year MBBS, as the attandance is on the lower side in clinical lectures of the above said years.

Learning Resources

Subject	Resources
Otorhinolaryngology	• Diseases of ear nose throat Dr Saleem Iqbal Bhutta • Scott Brown Otorhinolaryngology Head & Neck Surgery, Eighth Edition • Diseases of Ear, Nose and Throat & Head and Neck Surgery, Seventh Edition, PL Dhingra • Color Atlas of ENT diagnosis, Tony R. Bull, 5th Edition • Ear, Nose and Throat, Self-Assessment and Self Evaluation Manual, Second Edition, PL Dhingra
Community Medicine	• Park's Textbook of Preventive and Social Medicine, 26th edition, Chapter 3, 4, 5 • Textbook of Community Medicine by Muhammad Ilyas and Dr Irfanullah Siddiqi • Epidemiology by Leon Girdis

Section – VI Annexures



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No. 1372/RMU, Dated: 30/01/2026
A-7

All Chairpersons/HoDs
Basic & Clinical Sciences Departments,
Rawalpindi Medical University,
Rawalpindi.

Subject: **Revised Professional Examinations Policy – MBBS (1st to Final Year) 2025**

Please find attached the revised Professional Examinations Policy for 1st to Final Year MBBS, aligned with TOS for 2025, for reference and implementation please.

Vice Chancellor
Rawalpindi Medical University
Rawalpindi

No. & Date Even
Copy to:
1. All concerned
2. Office Superintendent, RMU, Rwp.
3. Office file.

Vice Chancellor
Rawalpindi Medical University
Rawalpindi

Rawalpindi Medical University (RMU)

Revised Professional Examination Policy – MBBS (First to Final Year)

(Aligned with Final Annual Assessment Table of Specifications year 2025)

1. Purpose and Scope

This policy defines the structure and rules for Final Professional Examinations for all MBBS professional years at Rawalpindi Medical University (RMU).
It ensures consistency, transparency, and alignment with the Table of Specifications (TOS 2025) approved by Board of Faculty.

2. Definitions

- **Block:**
  A thematic academic unit (e.g., Block I, II, III etc) comprising multiple subjects.
- **Component (Subject):**
  Each subject within a Block (e.g., Pharmacology , Pathology , Community Medicine Physiology etc.).
- **Sub-components:**
  Each subject has two assessment parts:
  - Theory (Knowledge Component) – MCQs, SEQs.
  - Practical / Skills Component – OSPE, OSCE, OSVE, Viva.
- **Continuous Internal Assessment (CIA):**
  40% marks calculated from CIA (30% from module , block assessments and 10% from LMS-based assessments).
- Final Annual Assessment: Assessment taken at the end of academic year and carries 60% of the total marks for the final annual assessment

3. Passing Criteria (As Per Final Annual Assessment TOS 2025)

To be declared Pass in a Block, a student must:

3.1. At Subject (Component) Level:

- Secure at least 50% marks in each subject of the relevant Block.
- Within each subject, both theory and practical sub-components must be cleared separately (≥50% in each)

3.2. At Block Level (Aggregate):

- Obtain at least 50% aggregate marks in the entire block (sum of all subjects +CIA)

3.4. Example Calculation for passing criteria

Block 3 of year 4 MBBS

Subject	Total Marks		Theory	Practical	Minimum marks required to pass theory	Minimum marks required to pass practical
	Prof	CIA	Prof Marks +CIA	Prof Marks +CIA		
Pharmacology	50	40	25+20=45	25+20=45	22.5	22.5
Community Medicine	30	20	15+10=25	15+10=25	12.5	12.5
Pathology	100	60	50+30=80	50+30=80	40	40
Total Marks (Block)	180	120	150	150	75	75

4. Failing Criteria

Students not meeting criteria mentioned in clause 3.1 and 3.2 will be declared failed

5. Examination Rules

1. Each Block shall be considered a complete academic and assessment unit. A student shall be declared *pass in the Block* only when all its constituent components (subjects) are passed and the overall Block Aggregate reaches the prescribed level(score).
2. It is mandatory to pass each subject within its respective block, not on the aggregate marks of that subject across all blocks.
3. **Failure in a Subject (Component):**
   If a student fails in any component (subject) within a Block, they shall appear in relevant block only in that failed subject **(s)** during the Supplementary Examination.
4. **Reappearance in Sub-components:**
   Within the failed subject, the student shall reappear in both Theory and Practical sub-components, regardless of which sub-component was failed earlier.
5. **Failure in Block Aggregate:**
   If a student passes all individual subjects (each securing **≥50%**) but fails to achieve the required Block Aggregate of 50%, the student shall reappear in the entire Block (all subjects) during the Supplementary Examination.
6. **Continuous Internal Assessment (CIA):**
   The CIA marks shall be carried forward to the Supplementary Examination.
7. **Structure and Weightage:**
   The Supplementary Examination shall follow the same format, structure, and weightage as the Final Annual (Professional) Examination.

6. Eligibility for Supplementary Examination

A student shall be eligible for Supplementary Examination if:

1. They have completed the required regular attendance and CIA as per policy.
2. They have failed in one or more subjects (components) or failed to meet the aggregate as per passing criteria as mentioned in clause 3.1 and 3.2.

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

Reference:

- *UHS Policy*
- *PMDC Policy*

List Of LGIS Topics

Theme 1: Otalgia, Ear Discharge & Dizziness, Hearing loss

Sr. no.	Topic	Faculty
1	Anatomy, Physiology of Ear, External ear inflammatory conditions	Dr. Shafaq/Dr. Fatima
2	Acute otitis media, Otitis media with effusion	Dr. Maimoona/ Dr.Namra
3	Meniere's disease, BPPV	Dr. Maimoona/Dr. Sundas
4	Sensorineural, noise induced, drug induced hearing loss/Tympanometry Audiology	Dr. Haitham/ Dr.Tabassum
5	Chronic Otitis media with complications	Prof Dr. Sadia/ Dr.Ashar
6	Facial nerve and its disorders	Dr. Fatima/ Dr. Namra
7	Otosclerosis	Dr. Farhat /Dr.Zainab
8	A female diabetic patient with otalgia, ear discharge	Dr. Farhat Dr. Zainab

Theme 2: Rhinorrhoea, nasal obstruction

Sr. no.	Topic	Faculty
1	Nasal septum and its diseases, Septal haematoma, abscess and perforation, Foreign body nose	Dr Haitham/Dr Tabasum
2	Allergic rhinitis, Acute and chronic Rhinosinusitis with complications	Prof Dr. Sadia/Dr.Ashar Alamgir
3	Nasopharyngeal Angiofibroma, Nasal polyps, FESS	Dr. Sundas/ Dr.Fatima
4	A young male with profuse nose bleed	Dr. Shafaq
5		Dr. Namra

Theme 3 : Sore throat

Sr. no.	Topic	Faculty
1	Anatomy and Physiology of oral cavity, Pharynx	Dr. Zainab/Dr.Farhat
2	Acute tonsillitis, Chronic tonsillitis, Adenoids	Dr. Tabasum/Prof Dr Sadia
3	Premalignant lesions of oral cavity, submucous fibrosis	Dr. Haitham/ Dr. Farhat
4	Quinsy, Retropharyngeal, parapharyngeal abscess	Dr. Asher/Dr Sundas
5	Acute and chronic pharyngitis, Differentials of Membranous tonsillitis	Dr. Namra/ Dr. Shafaq.
6	Salivary gland Diseases(Mumps, parotitis, submandibular sialadenitis)	Dr Shafaq. /Dr. Maimoona
7	A child with recurrent sore throat and fever	Dr Fatima /Dr. Maimoona

Theme 4: Hoarseness, dysphagia

Sr. no.	Topic	Faculty
1	Anatomy and physiology of Larynx, Trachea and esophagus	Dr. Ashar/ Dr Zainab
2	Vocal nodule, vocal polyp, Rienke's edema	Dr. Sundas/ Dr. Namra
3	Foreign body aerodigestive tract	Dr. Zainub/ Dr.Fatima
4	Laryngomalacia/ Juvenile laryngeal papillomatosis	Dr Haitham/Dr. Tabassum
5	Plummer Vinson Syndrome, Croup, ALTB	Prof Dr Sadia / Dr.Fatima
6	Tracheostomy indications and complications	Dr. Maimoona/ Dr.Shafaq
7	An old age man with hoarseness of voice and difficulty in breathing	Dr. Shafaq/ Dr.Farhat

Theme 5: Neck Masses

Sr. no.	Topic	Faculty
1	Cervical Lymphadenopathy	Dr. Sundas/ Dr. Zainab
2	Anatomy and physiology of neck, Thyroid gland	Prof Dr. Sadia/ Dr. Farhat
3	Thyroglossal duct cyst, Goitre	Dr. Haitham / Dr. Fatima
4	Branchial Cyst/Branchial fistula	Dr. Namra/Dr. Maimoona
5	Radiology in ENT	Dr. Ashar/ Dr. Farhat
6	Ludwig's angina	Dr. Shafaq /Dr. Tabasum
7	A child with fever, neck swelling, difficulty in breathing	Dr. Maimoona / Dr. Namra

List Of Community Medicine Module 1 (11 Lectures)

Sr No	Broad Area Of Teaching	No Of Lectures	Faculty Nominated
1.	Introduction to Community Medicine & Public health	1	Prof Dr Rozina Shahadat Khan (HOD Community Medicine) in CPC
2.	Fundamental concepts of Preventive medicine- I Health & Disease	1	Prof Dr Rozina Shahadat Khan (HOD Community Medicine), Dr Afifa Kulsoom(Assoc Prof)
3.	Concept of wellbeing, Health indicators	1	Prof Dr Rozina Shahadat Khan (HOD Community Medicine), Dr. Imrana Saeed, (APMO)
4.	Concepts of prevention & mode of intervention	1	Prof Dr Rozina Shahadat Khan (HOD Community Medicine), Dr. Imrana Saeed, (APMO)
5.	Hearing loss due to noise pollution		Prof Dr Rozina Shahadat Khan (HOD Community Medicine), Dr Mehjabeen Qureshi (Senior Demo)
6.	Fundamental Concepts & Uses of Epidemiology	1	Dr Sana Bilal (Assoc Prof), Dr Khola Noreen(Assoc Prof)
7.	Introduction to Epidemiologic Methods-descriptive studies		Dr Sana Bilal (Assoc Prof), Dr Khola Noreen(Assoc Prof)
8.	Droplet infections I-Small pox, chicken pox, measles		Dr Narjis(APWMO),Dr Asif (Demonstrator)
9.	Droplet infections II- Rubella, Pertussis, Mumps		Dr Mehwish Riaz(Asst Proff), Dr Mehjabeen (Senior Demo)
10.	Droplet infections III-Tuberculosis		Dr Narjis(APWMO),Dr Asif (Demonstrator)
11.	Droplet infections III (Meningitis, Diphtheria)		Dr Imrana Saeed (APWMO), Dr Mehwish Riaz(Asst Proff)

List Of Community Medicine Module 2 (11 Lectures)

S NO.	Broad Area Of Teaching	No of lectures	Faculty nominated
1.	Measures of morbidity SGD	1	Dr Mehjabeen (Senior Demo),Dr Saba, Dr Zaira (Sr PGTs)
2.	Analytical epidemiological studies (case-control studies)	1	Dr Khola Noreen (Assoc Prof),Dr Sana Bilal (Assoc Prof)
3.	Analytical epidemiological studies (cohort studies)		Dr Khola Noreen (Assoc Prof),Dr Sana Bilal (Assoc Prof)
4.	Experimental study design	1	Dr Khola Noreen (Assoc Prof),Dr Sana Bilal (Assoc Prof)
5.	Non probability Sampling	1	Dr. Afifa (Assoc Prof), Dr. Mehwish Riaz(Asst Proff)
6.	Association & Causation	1	Dr Khola Noreen,(Assoc Prof) ,Dr Imrana Saeed(APWMO)
7.	Air and ventilation		Dr Mehjabeen (Senior Demo),Dr Asif (Demo),
8.	Probability sampling	1	Dr. Afifa (Assoc Prof), Dr. Mehwish Riaz(Asst Proff)
9.	Measures of mortality (SGD)	1	Dr Narjis(APWMO),Dr Maria, Dr Mehreen),(Sr PGTs)
10.	Environment and health (Air Purification Global Warming)	1	Dr Asif, Dr Narjis

Rawalpindi Medical University
4th Year MBBS Model MCQs (USMLE Format)

1. A 24-year-old male presents with long-standing foul-smelling ear discharge and progressive hearing loss. He now develops vertigo on pressure over the tragus and during suction clearance. Otoscopy shows attic retraction with keratin debris. Which of the following is the most likely underlying pathology responsible for vertigo? A. Serous labyrinthitis B. Lateral semi circular canal fistula C. Otosclerosis D. Eustachian tube dysfunction E. Acute otitis media	**Otology**
2. A 55-year-old hypertensive patient presents with profuse unilateral epistaxis not controlled by anterior nasal packing. Bleeding continues into the oropharynx. The next most appropriate step is: A. Septoplasty B. Posterior nasal packing C. Chemical cautery with silver nitrate D. Functional endoscopic sinus surgery E. Nasal steroid spray	**Rhinology**
3. A patient undergoes thyroidectomy and later develops hoarseness and weak cough. Flexible laryngoscopy shows the vocal cord lying in paramedian position. Which nerve injury most likely explains this finding? A. Internal branch of superior laryngeal nerve B. External branch of superior laryngeal nerve C. Recurrent laryngeal nerve D. Glossopharyngeal nerve E. Hypoglossal nerve	**Laryngology**
4. A diabetic patient presents with fever, trismus, medial bulging of tonsillar pillar, and severe throat pain. Contrast CT shows collection extending from tonsillar region into parapharyngeal space. Which of the following is the most serious early complication to monitor? A. Otitis externa B. Airway obstruction C. Facial nerve palsy D. Allergic rhinitis E. Nasal septal deviation	**Head & Neck**

Rawalpindi Medical University
4th Year MBBS Model EMQ

1. Different patients present to the ENT clinic with complaints related to ear discharge, hearing loss, tinnitus, and vertigo. Based on the clinical features described in each statement, select the MOST appropriate option from the list below. Each option may be used once, more than once, or not at all.

List of Options (A–H)

A) Acute suppurative otitis media
B) Chronic suppurative otitis media (tubotympanic type)
C) Chronic suppurative otitis media (atticoantral type)
D) Otosclerosis
E) Serous otitis media
F) Meniere's disease
G) Otitis externa
H) Presbycusis

Statements

1. A patient presents with foul-smelling ear discharge, attic retraction pocket, and risk of intracranial complications.
2. A young adult complains of progressive conductive hearing loss with a normal tympanic membrane and absent stapedial reflex.
3. A child presents with hearing loss following an upper respiratory tract infection, and otoscopy shows a dull tympanic membrane with fluid level.
4. A patient has profuse, painless ear discharge with a central tympanic membrane perforation.
5. An elderly patient presents with bilateral, symmetrical sensorineural hearing loss, worse for high frequencies.
6. A swimmer presents with severe ear pain, tenderness on pulling the pinna, and a narrowed external auditory canal.
7. A patient presents with episodic vertigo, fluctuating hearing loss, tinnitus, and aural fullness.
8. This condition is most commonly associated with cholesteatoma formation.

Answer Key

1. C) Chronic suppurative otitis media (atticoantral type)
2. D) Otosclerosis
3. E) Serous otitis media
4. B) Chronic suppurative otitis media (tubotympanic type)
5. H) Presbycusis
6. G) Otitis externa
7. F) Meniere's disease
8. C) Chronic suppurative otitis media (atticoantral type)

Rawalpindi Medical University
4th Year MBBS Model SEQS & SAQs (USMLE format)

S.No.	Question	Marks	Domain
1	A 5-year-old child is brought to the emergency department with high-grade fever, difficulty in swallowing, drooling of saliva, muffled voice, and respiratory distress. The child is sitting in a leaning-forward position and appears anxious. a.What is the most likely diagnosis? b. What is the characteristic posture seen in this condition? c. What is the most common causative organism? d. What is the most important first step in management? e. Name one investigation that should be avoided before securing the airway.	 1 1 1 1 1	ENT
2	A 12-year-old boy presents with persistent ear discharge for 6 months. The discharge is foul-smelling and associated with decreased hearing. On otoscopy, there is a marginal perforation with granulation tissue. a. What is the most likely type of CSOM? b. What is the main risk associated with this type of disease? c. Name one extracranial complication. d. Name one intracranial complication. e. What is the definitive surgical management?	 1 1 1 1 1	Community medicine
3	A 30-year-old patient presents with bilateral nasal obstruction, hyposmia, and mouth breathing. On examination, pale, glistening masses are seen in both nasal cavities. a. What is the most likely diagnosis? b. From which sinus do ethmoidal polyps commonly arise? c. What are the typical characteristics of a polyp on probing? d. Name one medical treatment option. e. What is the definitive surgical treatment?	 1 1 1 1 1	Pathology

Clinically Oriented Observed and Structured Practical Examination
4th Prof MBBS Annual 2023
Station 9 (Throat)

Total marks :	05
Time allotted:	4 min
Requirements:	Patient, stool, headlight and tongue depressor
Objectives:	To Diagnose Condition and manage it
Subject:	Core ENT , Pharmacology, Pathology Integration horizontal

A 19- year-old boy presented in ENT OPD with complaint of sore throat, high grade fever with rigors and chills, difficulty in swallowing and earache. On examination, a membrane is visible extending onto the medial surface of tonsils.

a. **What is your diagnosis** **01**
b. **Enlist 2 differential diagnosis** **02**
c. **Treatment plan** **02**

Sample Image Based MCQ LMS