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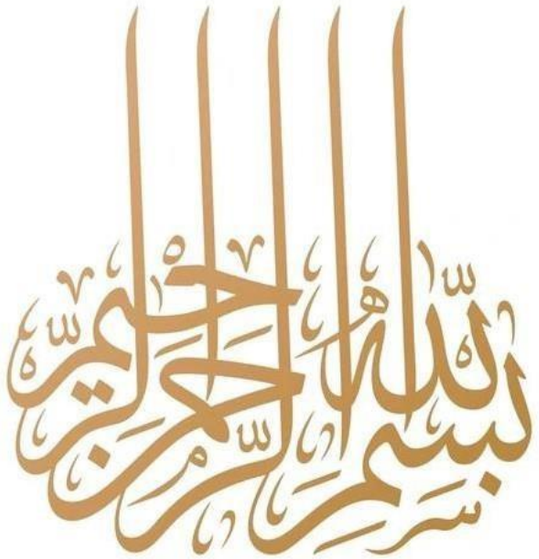
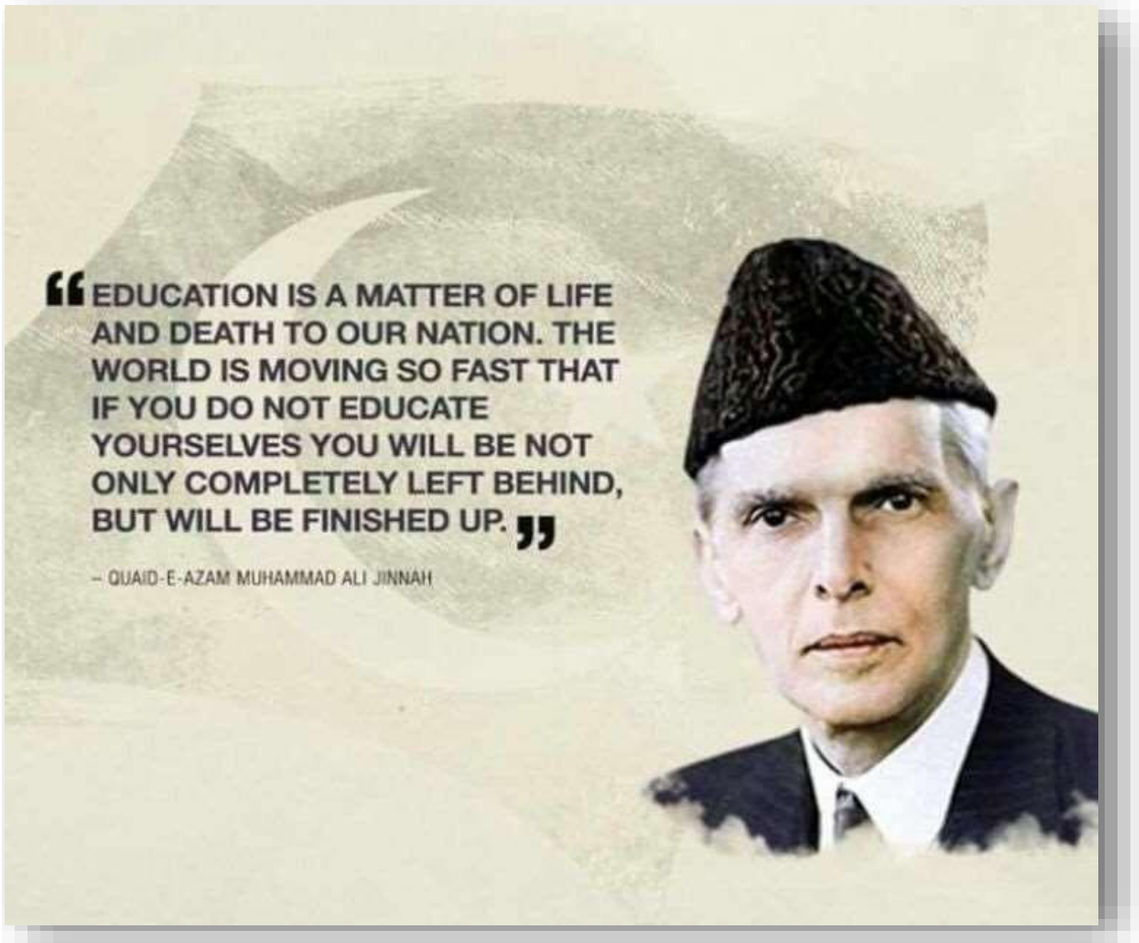
Rawalpindi Medical University
MBBS
Final Year Integrated Modular Curriculum
PEDIATRICS
2025



Dedicated to Hazrat Muhammad (S.A.W)

Modular Integrated Curriculum
2025
MBBS FINAL YEAR
PAEDIATRIC MEDICINE

Quote by Quaid-e-Azam Muhammad Ali Jinnah



Sardar Saleem Haider Khan

Governor Punjab

It is with great pleasure that I extend my congratulations to Rawalpindi Medical University on the introduction of its Integrated Curriculum. This progressive step reflects the university's commitment to shaping the future of medical education inPakistan, ensuring that our future healthcare professionals are equipped with the skills and knowledge needed to meet the evolving demands of healthcare, both locally and globally.

The integrated curriculum represents a significant shift in how medical education is delivered, focusing on the interconnection between various disciplines and emphasizing patient-centered care. By blending theoretical knowledge with practical application from the early stages of their education, students are better prepared to understand the complexities of human health and the diverse challenges they will face in their medical careers. This holistic approach is critical in nurturing well-rounded professionals who are not only adept clinicians but also compassionate caregivers.

Rawalpindi Medical University has always been at the forefront of medical education, and this curriculum reflects its visionary leadership in preparing graduates who are ready to confront the future of healthcare with confidence and competence. I am confident that this initiative will greatly contribute to the advancement of healthcare in Punjab and beyond, ensuring that our doctors are not only skilled but also compassionate and ethical leaders in their field.

Mr. Khawaja Salman Rafique

Minister, Specialized Healthcare & Medical Education Department

The Rawalpindi Medial University, Rawalpindi has consistently evolved and adapted to support its learners, uphold academic standards, and maintain its status as a globally recognized institution. The launch of the ‘Modular Curriculum 2024 marks a significant step forward in advancing public health and addressing future healthcare needs. By embracing this curriculum, students and professionals alike will gain the toolsto turn knowledge into practical expertise, positioning themselves as leaders in research, public service, sustainable healthcare, and accessible medical care.

A curriculum’s success hinges on the dedication of those who implement it. The true impact of this program will be realized through the joint efforts of educators and learners. I am confident that this integrated educational framework will equip our futuredoctors to confront global health challenges, including emerging disease trends, healthcare equity, and solutions for underserved communities.

Prof. Dr. Muhammad Umar
Vice Chancellor RMU

Prof Jahangir Sarwar Khan
Principal RMC

There is no subject which will require more careful consideration in the settlement of the educational details of the University of which RMU is to be the center than that of the choice and arrangement of the curriculum to be required for the degree in medicine. An exceptional opportunity presents itself, you have, within certain limits, a tabula rasa, and it behooves the authorities of the future university to mark it in the manner best calculated to promote the advance of medical science and the efficiency of medical teaching. If, from an experience acquired as a teacher and examiner in various universities during a period of more than a quarter of a century, I can help in the promotion of these objects, by pointing out virtues which may be emulated here,and failings which may be avoided there. I shall at least feel I have done something to assist in the modelling of what will, we all hope, become one of the great centers of learning of Pakistan.

But whilst endeavoring to sketch out what subjects should form part of the medical curriculum of a university, and to appraise their relative order and value, I do not propose to place before you an ideal which is unattainable under the circumstances of place and time, in which you find yourselves, although it would be easier to construct an ideal curriculum than to plan one out within the limits of present-day practicability. I suppose that the integrated modular curricula now being established in our university will more nearly approach the ideal.

The diverse faculty and student body make our programs earn top national and international reputation. I can say with complete confidence that what makes our university exceptional are the faculty & staff who are dedicated to help our aspiring students to become the compassionate, highly skilled health-care providers of tomorrow.

Prof. Dr. Ifra Saeed
Professor of Anatomy
Director DME

Prof. Rai Muhammad Asghar
Dean of Paediatrics
Rawalpindi Medical University

This is a great prospect for RMU and curriculum committee to formulate the modular curriculum of Final Year MBBS. It is a task, well meant for its contribution in medical education. Hopefully it will go a long way in training the medical graduates, as per required national and international standards of medical education. The Modular teaching is likely to give a fresh and varied approach to learning process and at the end optimizing maximum learning outcomes. This entails coordination, patience, commitment and diligence from all those who are on board, either the faculty or the students. All this seems to be encouraging, yet limited resources, inadequate manpower, and difficulty in breaking traditional shackles are tangible obstacles.

The preparation and implementation of modular curriculum provides the faculty an opportunity to design and re orientate and re-conceptualize health –illness process. Transforming academic stakeholders' learning perspectives and then to translate it in students' development as an effective force of society, well versed with modern day problems, is an uphill task. This is a humble effort in this regard. Still there is lot to distill, crystallize and narrate. Hopefully from this marathon, the curiosity will emerge like a fresh breeze, from here the character will arise in the horizon, as all this at the end is meant to serve the ailing humanity and to accomplish the dream of a healthy society.

At the end, it will be great injustice not to acknowledge the unwavering and untiring support of Prof Dr Muhammad Umar, Vice Chancellor RMU, who is an ardent supporter and promoter of anything which gives a fresh impetus to medical education and practice. It's all because of his continuous input and persuasion, that the modular curriculum achieved fruition.

Dr. Omaima Asif
Assistant Director DME/ Editor

As we begin this exciting new chapter with the Integrated Modular Curriculum, I want to take a moment to share my enthusiasm for the opportunities it brings to both our students and faculty. This forward-thinking curriculum is crafted to enrich the educational journey while better preparing our future healthcare professionals to tackle the intricacies of patient care.

In today's fast-changing medical environment, it is essential that our educational approach reflects the interconnectedness of healthcare. The Integrated Modular Curriculum dismantles conventional barriers, allowing students to experience a comprehensive view of medicine, where foundational sciences, clinical skills, and patient interactions come together seamlessly.

Our focus on active learning and collaborative approaches will empower students to think critically, adapt to new challenges, and develop the empathy vital in our profession. By emphasizing a patient-centered methodology and incorporating real-world experiences, we aim to foster a profound understanding of the impact of medical practice on individuals and communities.

I am thrilled about the potential this curriculum holds and deeply appreciate the commitment of our faculty and staff in bringing it to fruition. Together, we will cultivate a new generation of medical professionals who are not only well-informed but also compassionate, ready to make a positive impact on their patients' lives.

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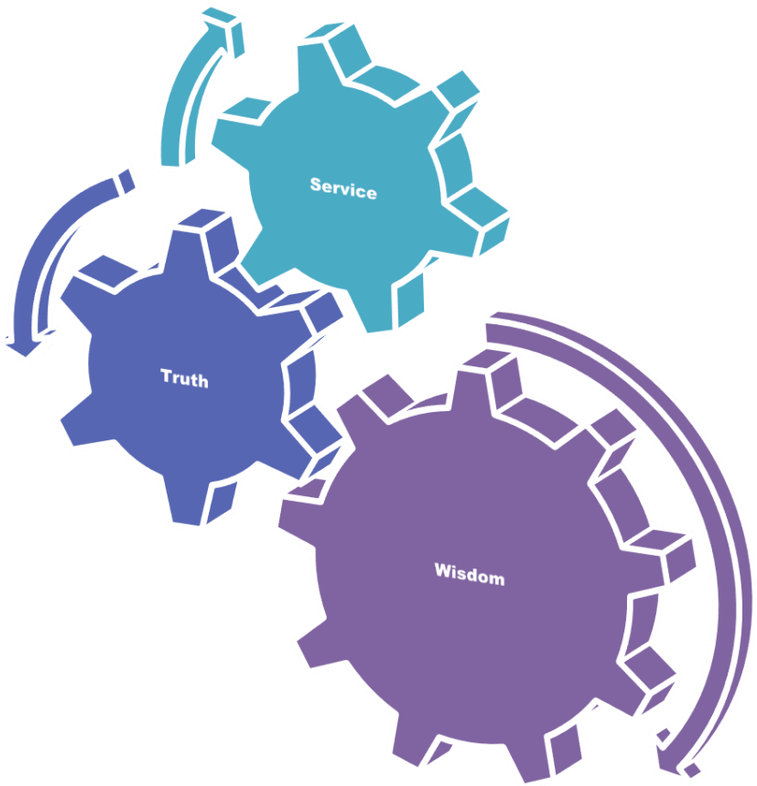
University Moto, Vision, Values & Goals

RMU Motto



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 critical thinkers, experiential self-directed lifelong learners and are socially accountable

Mission Statement

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

Outcomes 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 evidence-based knowledge to help you attain personal and professional growth & excellence.

RMU ISO Certification

RICI

The management system of

Rawalpindi Medical University

Tipu Road, Chamanzar Colony, Rawalpindi, Pakistan.

has been assessed and certified as meeting with the requirements of

ISO 9001:2015

Under the Scope:

"Providing Education Services for Medical Graduation & Post Graduation."

Certificate Number : PK230048

Issue date : 10-10-2023.

Valid till : 09-10-2024.

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Dr. Tariq Saeed Dr. Mudassar Sharif	2018-2019	1st	Developed for Final year MBBS Learning Objectives added.
Dr. Tariq Saeed Dr. Mudassar Sharif	2020-2021	2nd	Developed for Final Year MBBS Learning Objectives updated. Time Table, Teaching strategies updated
Dr. Tariq Saeed Dr. Mudassar Sharif Dr. Hina Sattar	2021-2022	3rd	Developed for Final Year MBBS. Horizontally and vertically integrated Learning objectives updated, Research curriculum incorporated
Dr. Tariq Saeed Dr. Mudassar Sharif Dr. Hina Sattar Dr. Asad Shabbir Dr. Ayesha Tariq	2022-2023	4th	Developed for Final MBBS. Horizontally and vertically integrated Learning objectives updated, Research, Bioethics, Family Medicine curriculum incorporated along with Professionalism
Dr. Mudassar Sharif Dr. Aqeela Ayub Dr. Hina Sattar Dr. Asad Shabbir Dr. Ayesha Tariq	2023-2024	5th	Developed for Final Year MBBS. Horizontally and vertically integrated Learning objectives updated, Research curriculum revamped Bioethics, Family Medicine curriculum incorporated along with Professionalism. Compulsory manuscript writing incorporated

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SECTION-I

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SECTION II

Preamble

Modular Integrate Curriculum

Welcome to the Clinically Oriented Integrated Modular Curriculum for the MBBS students at Rawalpindi Medical University. This revised version is tailored to integrate clinical insights from the very beginning, ensuring a more practical and application-focused approach to the fundamental medical sciences. At Rawalpindi Medical University, we are committed to providing a curriculum that not only covers the essential theoretical knowledge but also emphasizes the development of critical clinical skills necessary for future medical professionals. This curriculum is designed to foster a deep understanding of human biology and the pathophysiological processes, combined with hands-on clinical experiences that contextualize theoretical knowledge in real-world medical settings.

curriculum incorporates the latest advancements in medical education and reflects changes in the medical landscape, ensuring our students are well-prepared to meet the challenges of modern healthcare environments. With a focus on interdisciplinary learning and ethical practice, we aim to equip our students with the competence and compassion required to excel in their future careers.

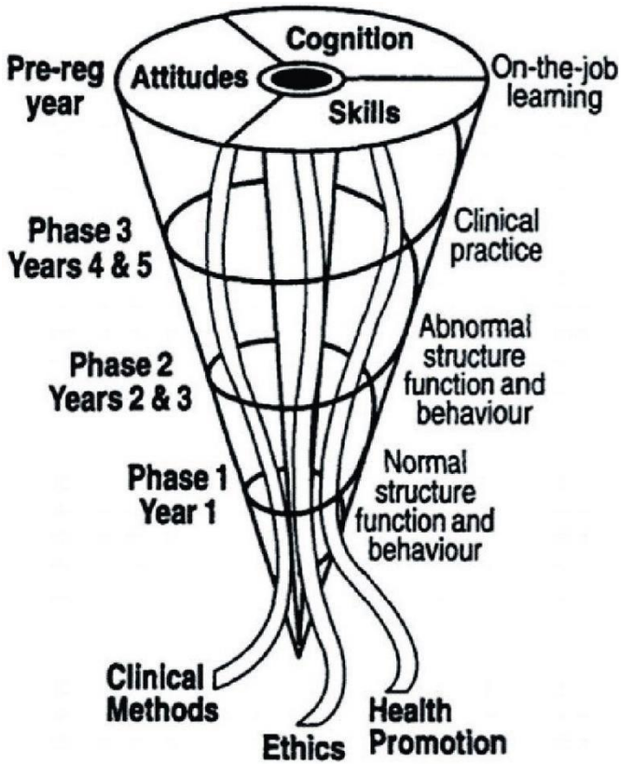
We trust that this curriculum will inspire and challenge you to reach new heights in medical education and beyond. Welcome to a journey of learning that promises to be as rewarding as it is demanding.

What is curriculum?

According to definition curriculum can be classified into five categories:

1. Curriculum as a product - program, document, electronic media, or multimedia
2. Curriculum as a program of study - usually courses offered, curriculum sequences of study in standards as benchmarks, gateways,
3. Curriculum as intended learnings - goals, content, concepts, generalizations, outcomes
4. Curriculum as experiences of the learner - activities, planned and unplanned.
5. Hidden curriculum - what students learn that isn't planned - unless you plan for this - or is it possible?

What is Integrated Medical Curriculum?



Shoemaker defines an integrated curriculum as “education that is organized in such a way that it cuts across subject matter lines, bringing together various aspects of the curriculum into meaningful association to focus upon broad areas of study.” There is an ongoing discussion about whether medical curriculum should be discipline based or integrated. Most curricula for medical education have been integrated horizontally and vertically–-vertically between basic and clinical sciences. The Flexnerian curriculum has disappeared to permit integration between basic sciences and clinical sciences, which are taught throughout the curriculum. We have proposed a different form of integration where the horizontal axis represents the defined learning outcomes and the vertical axis represents the teaching of the sciences throughout the courses. We believe that a mere integration of basic and clinical sciences is not enough because it is necessary to emphasize the importance of humanism as well as health population sciences in medicine. It is necessary to integrate basic and clinical sciences, humanism,and health population in the vertical axis, not only in the early years but also throughout the curriculum, presupposing the use of active teaching methods based on problems or cases in small groups.

The method of teaching medicine, since Flexner's days, implies that students should first learn basic and biomedical sciences and then move to clinical sciences; however, this is not how patients are presented. A common criticism of this approach is that students will not see the relevance of basic and biomedical sciences applied to clinical practice, and it is preferable to encourage students to think as doctors from the day they enter medical school.

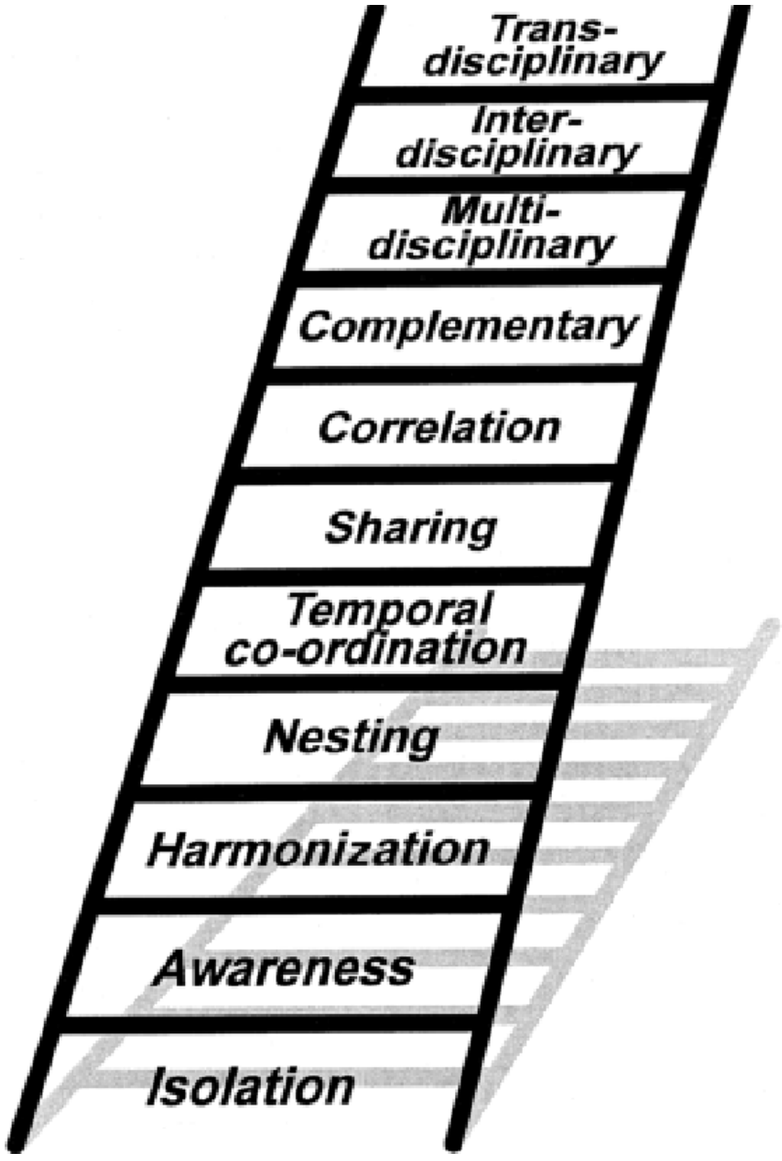
Integration is therefore of key importance for medical education because basic science learning is placed in the context of clinical and professional practice and is considered by students to be more meaningful and relevant. In the vast majority of curriculum reforms, vertical integration combines basic and clinical sciences, early clinical experience, clinician–scientist partnerships, and incorporation of sciences in the later years of the course. This is undoubtedly an advantage, but is based on a biologist's vision of the health-illness process

Levels of Integration

At Rawalpindi Medical University, our curriculum for the MBBS program adheres to the sophisticated model of Correlation, recognized as level 7 on Harden's scale of integration. This approach is foundational throughout the initial four years of the medical education journey. Our emphasis predominantly remains on discipline-specific education, where courses focused on individual subjects constitute the majority of the curriculum. This traditional structure ensures a robust foundation in the core medical sciences.

Within this discipline-oriented framework, we introduce an innovative element—an integrated teaching session. These sessions are strategically designed to bridge various subjects by identifying and connecting areas of mutual relevance. This method facilitates a holistic learning experience by correlating distinct disciplines and embedding them within a clinical context. This integration enhances the students' understanding and application of medical concepts, making the learning process both comprehensive and applicable to real-world scenarios.

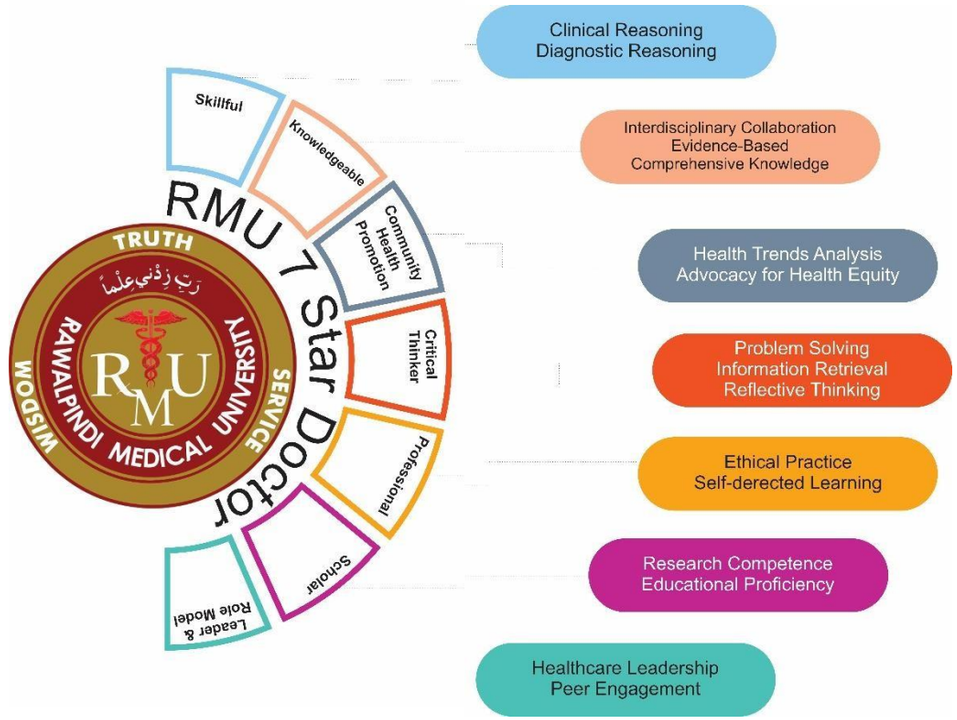
As our students progress through their education, the degree of clinical teaching intensifies. This gradual increase is deliberate, ensuring that by the time our students reach their final year, they are well-prepared to engage in extensive clerkships. Year V is exclusively devoted to these clerkships, offering students hands-on, practical experience in a variety of clinical settings. This exposure is crucial for the development of competent and empathetic future physicians who are equipped to meet the diverse needs of their patients and the healthcare system at large.



PMDC Seven Star Doctor Competencies

At RMU we aim to produce seven-star doctor according to PMDC Competencies having the generic competencies of “Skill, Knowledge, Community Health Promoter, Critical Thinker, Professional, Scholar, Leader and Role Model”, Rawalpindi Medical University has introduced modular integrated undergraduate curriculum as being first public sector university. These competencies are further outlined by various enabling traits specifying knowledge, skills, and attitude.

Several key features have been integrated into Curriculum 2K23 for all three training domains, following discussions and an iterative process involving subject experts, medical educators, and university leaders. These features include:



Horizontal Integration
Cognitive Domain
The Curriculum 2K23 framework consists of 44 modules distributed over five years. It features a modular design that allows various foundational disciplines to address themes concurrently. Each module is organized to represent all key disciplines according to their content weight. The assessment framework also incorporates applied and clinical elements into the learner's conceptual development, ensuring that clinical relevance and context remain central to the education process.
Clinical Relevance:

Each module's objectives are introduced with the relevant themes and clinical significance. This approach is based on the module's rationale, guiding the learning process toward a practical professional perspective. However, institutions have the flexibility to adopt alternative thematic approaches as long as the program outcomes are met effectively.

Integration:

The spiral arrangement of modules within the framework facilitates a revisiting of basic sciences. Initially, the applied and clinical learning objectives guide the learner, while the recurring modules align with clinical rotations, all framed by the foundational sciences. In the final year of clerkship, students have their last opportunity to integrate their learning, which is primarily workplace-based and combines elements from all three domains.

Clinical Clerkship

Psychomotor

Clinical Skills follow a spiral which is entirely skills dominant. This spiral is the core of psychomotor training. The rotations in different wards will be based on foundational developmental already commenced in previous years. . Community oriented practices and family medicine will also be broadening the element of systems thinking and diversity of practice for a healthcare leader of tomorrow. Finally, Clinical Clerkships are aimed to be entirely facilitated in workplace environments. The clerkship model will involve the delegation of duties thus adding to the acquisition of professional accountability as a competency. The psychomotor training and skills acquisition will be the maximum in the year of clerkship. The entire process of C-FRC will be endorsed in a logbook which would be the training base of the learner for future references and exam evaluations.

Spiral Integration

Affective Domain

ALPHA Model:

Affective training has been formally integrated into the curricular framework through the ALPHA model, which aims to produce doctors with strong, resilient, and ethically grounded character. ALPHA stands for Artificial Intelligence, Leadership, Professionalism, Humanities & Arts , encompassing professional development for the effective application of acquired knowledge and skills. To ensure that professionals are socially accountable and capable of taking on healthcare leadership roles—such as advocacy, equity, and resource access—formal training is essential.

This training is structured through a categorical approach that includes assessing competencies and developing portfolios. The ALPHA framework will be implemented year-round through portfolio development, which promotes student-centered learning. The self-reflection involved in portfolio creation allows learners to identify and address their own educational needs.

The Medical Education department will directly oversee the ALPHA spiral, but teaching sessions and mentoring can be facilitated by other disciplines. For instance, communication skills may involve input from Family Medicine faculty, while Community Medicine and Public Health can support research training. Ethics education can be jointly provided by the Bioethics and Behavioral Sciences departments. Leadership training will benefit from the involvement of institutional leaders and successful alumni.

The Faculty of Medical Education will manage the entire process and contribute to teaching as needed. The academic council, in collaboration with the Medical Education department, should define the types of evidence, activities, and learning situations required for competency acquisition in the portfolios. A 'mentoring platform' can embody the spirit of affective learning within the ALPHA framework, leading to the recommendation for developing a mentorship program at each institution.

SECTION – III

RMU Undergraduate Competency Model

RMU Competency Framework

The focus of this curriculum is on the roles of a general physician, as identified by the PMDC. These roles include being skillful, knowledgeable, a community health promoter, a critical thinker, a professional and role model, a researcher, and a leader. The competencies emphasized in the first and second years align with these roles.

RMU Competency Framework

RMU Undergraduate Competency Model

The Rawalpindi Medical University (RMU) Undergraduate Competency Model is designed to prepare medical students to meet the evolving challenges of modern healthcare. Grounded in the principles of patient-centered care, ethical practice, and community engagement, this model outlines the core competencies that every RMU graduate must attain. These competencies are carefully aligned with the needs of Pakistan's healthcare system and the broader global context, ensuring that RMU graduates are not only skilled clinicians but also ethical leaders, compassionate caregivers, and innovative problem-solvers.

The RMU Undergraduate Competency Model emphasizes a holistic approach to medical education, integrating scientific knowledge with practical skills, critical thinking, and a deep commitment to lifelong learning. Each competency is complemented by specific sub competencies that provide a clear roadmap for students' development, guiding them from foundational knowledge to advanced clinical practice.

Through this competency-based framework, RMU aims to cultivate graduates who are capable of delivering high-quality, safe, and effective care, while also advancing the health and well-being of the communities they serve. By adhering to these competencies, RMU students will be equipped to excel in diverse medical environments, adapt to the rapidly changing landscape of healthcare, and contribute positively to the society they serve.

Competency 1: Patient Care Deliverer

The "Patient Care Deliverer" competency focuses on the practical aspects of delivering patient care. It emphasizes the importance of applying clinical skills, knowledge, and compassion in providing high-quality healthcare to patients. Students are expected to develop a strong foundation in patient-centered care, practice-based learning, and a commitment to continuous improvement in their clinical practice.

- **Practice-Based Learning:** Students should engage in continuous learning through practical experience, applying evidence-based medicine and reflecting on their clinical practice to improve patient care.
    - Apply evidence-based medicine in clinical practice.
    - Reflect on clinical experiences to improve patient care.
    - Engage in self-directed learning to enhance clinical skills.
- **Service Orientation:** A commitment to serving others is fundamental to the practice of medicine. Students should prioritize the well-being of patients and the community, demonstrating a strong dedication to providing compassionate and effective care.
    - Demonstrate a commitment to patient-centered care.
    - Engage in community service activities.
    - Reflect on the role of service in medical practice.

Competency 2: Ethical & Professional

The "Ethical & Professional" competency encompasses the foundational principles of medical ethics and professional behavior. It requires students to uphold the highest standards of legal and ethical responsibility in their practice. They must demonstrate empathy, integrity, and accountability, treating all individuals with respect and maintaining a commitment to continuous improvement.

- **Professional & Ethical & Legal Responsibility:** Students are expected to understand and apply ethical principles and legal requirements in medical practice. They should be able to identify and analyze ethical dilemmas in healthcare settings and make decisions that prioritize patient well-being.
    - Explain ethical frameworks in medical decision-making.
    - Apply legal standards in patient care.
    - Demonstrate professionalism in all interactions.
- **Capacity for Improvement:** Students should continuously strive to improve their clinical skills, knowledge, and patient care practices through self-assessment and reflective learning.
    - Assess personal strengths and weaknesses.
    - Implement strategies for self-improvement.
    - Seek feedback from peers and mentors.
- **Empathy:** Understanding and sharing the feelings of patients is crucial for building trust and providing compassionate care. Students must develop the ability to empathize with patients from diverse backgrounds.
    - Demonstrate empathy in patient interactions.
    - Reflect on the emotional and psychological aspects of patient care.
    - Integrate empathy into clinical practice.
- **Integrity:** Students must practice medicine with honesty and adhere to moral and ethical principles, ensuring that their actions align with the values of the medical profession.
    - Maintain honesty in patient interactions.
    - Uphold ethical standards in clinical decision-making.
    - Demonstrate transparency in communication with patients and colleagues.
- **Accountability:** Medical students must be accountable for their actions, taking responsibility for their decisions and outcomes in patient care.

    - Take responsibility for clinical decisions.
    - Reflect on the outcomes of patient care.
    - Ensure accountability in teamwork.
- **Respect:** Respect for patients, colleagues, and the broader healthcare team is fundamental. Students should treat everyone with dignity and consideration, regardless of differences in background or beliefs.
    - Demonstrate respect in patient interactions.
    - Collaborate respectfully with team members.
    - Address cultural differences in a respectful manner.

Competency 3: Scholar & Life-Long Learner

The "Scholar & Life-Long Learner" competency highlights the importance of continuous learning and scholarly inquiry in medical practice. Students are encouraged to engage in scientific research, develop critical thinking skills, and commit to lifelong learning to stay current in their field and contribute to the advancement of medical knowledge.

- **Living Systems:** Students should have a deep understanding of living systems and their functions, enabling them to apply this knowledge to patient care.
    - Explain the principles of living systems.
    - Apply knowledge of living systems to clinical practice.
    - Evaluate the impact of living systems on health and disease.
- **Human Behavior:** Understanding human behavior is crucial for effective patient care and communication. Students should be able to analyze behavioral factors that influence health and apply this understanding in clinical settings.
    - Analyze the impact of behavior on health outcomes.
    - Apply behavioral principles in patient care.
    - Reflect on the role of behavior in health and disease.
- **Diagnose and Manage:** Students must be proficient in diagnosing and managing medical conditions, using evidence-based approaches to ensure the best possible outcomes for patients.
    - Diagnose medical conditions accurately.

    - Develop management plans for patient care.
    - Evaluate the effectiveness of treatment interventions.
- **Scientific Inquiry:** Engaging in scientific inquiry is essential for advancing medical knowledge. Students should be able to conduct research, critically appraise evidence, and contribute to the scientific community.
    - Conduct research on medical topics.
    - Critically appraise scientific literature.
    - Disseminate research findings effectively.
- **Quantitative Reasoning:** Quantitative reasoning skills are necessary for interpreting data and making informed decisions in medical practice. Students should be able to analyze and apply quantitative data in clinical settings.
    - Interpret quantitative data in clinical practice.
    - Apply statistical methods to medical research.
    - Reflect on the role of quantitative reasoning in decision-making.
- **Critical Thinker:** Developing critical thinking skills is vital for solving complex medical problems. Students should be able to analyze information, evaluate evidence, and make reasoned decisions in patient care.
    - Analyze clinical scenarios critically.
    - Evaluate evidence in medical practice.
    - Make informed decisions based on critical thinking.

Competency 4: Team Worker & Communicator

The "Team Worker & Communicator" competency emphasizes the importance of effective communication and teamwork in healthcare settings. Students are expected to develop strong oral and written communication skills, work collaboratively as part of a healthcare team, and demonstrate leadership when necessary. Reliability, adaptability, and resilience are key qualities that support their ability to function effectively in diverse and dynamic clinical environments.

- **Oral and Written Communication:** Students must be able to convey medical information clearly and effectively, both verbally and in writing, to patients, families, and colleagues.

    - Communicate medical information clearly.
    - Develop patient-centered communication strategies.
    - Write accurate and comprehensive patient records.
- **Team Member:** Students should actively participate as members of the healthcare team, contributing to collective problem-solving and decision-making processes.
    - Collaborate effectively with team members.
    - Participate in interdisciplinary case discussions.
    - Contribute to team-based patient care.
- **Team Leader:** When required, students should be able to take on leadership roles within the healthcare team, guiding and coordinating the efforts of others.
    - Lead a healthcare team in clinical settings.
    - Make decisions as a team leader.
    - Facilitate effective team communication.
- **Reliability and Dependability:** Students must consistently demonstrate reliability and dependability in fulfilling their clinical responsibilities, ensuring that they are trusted members of the healthcare team.
    - Fulfill clinical duties reliably.
    - Demonstrate dependability in patient care.
    - Maintain consistency in performance under pressure.
- **Resilience & Adaptability:** Students need to develop resilience to cope with the challenges of medical practice and adapt to changes in clinical settings.
    - Demonstrate resilience in stressful situations.
    - Adapt to changes in clinical practice.
    - Reflect on challenges and adapt strategies accordingly.

Competency 5: Community Health Promoter

The "Community Health Promoter" competency focuses on the role of medical students in promoting health within the community. It involves educating and empowering communities, conducting assessments, and engaging with diverse populations to address public health challenges. Cultural competence and advocacy are essential in promoting health equity and improving community health outcomes.

- **Health Education and Promotion:** Students should be able to design and implement health education programs that address the specific needs of the community.
    - Develop health education materials.
    - Implement community health promotion activities.
    - Evaluate the effectiveness of health education programs.
- **Community Assessment and Engagement:** Students must be capable of assessing the health needs of communities and engaging with community members to identify and address public health issues.
    - Conduct community health assessments.
    - Engage with community stakeholders.
    - Identify public health priorities based on community needs.
- **Cultural Competence:** Understanding and respecting cultural differences is crucial in providing effective community health promotion. Students should be able to work with diverse populations and tailor health interventions accordingly.
    - Demonstrate cultural sensitivity in community interactions.
    - Adapt health interventions to cultural contexts.
    - Reflect on cultural influences in health behaviors.
- **Advocacy and Empowerment:** Students should advocate for policies and practices that promote community health and empower individuals and communities to take control of their health.
    - Advocate for community health initiatives.
    - Empower individuals to make informed health decisions.
    - Promote policies that address social determinants of health.

Competency 6: Quality & Safety Practitioner

The "Quality & Safety Practitioner" competency emphasizes the importance of patient safety and quality improvement in healthcare. Students are trained to understand and apply patient safety principles, comply with regulatory requirements, and collaborate with interdisciplinary teams to ensure the highest standards of care.

- **Patient Safety Principles:** Students must understand and apply patient safety principles to prevent medical errors and enhance the quality of care.
    - Identify potential safety risks in clinical practice.
    - Implement strategies to prevent medical errors.
    - Evaluate the effectiveness of patient safety interventions.
- **Regulatory Compliance:** Knowledge of and adherence to regulatory standards is essential in maintaining patient safety and quality care. Students must be familiar with relevant regulations and ensure compliance in their practice.
    - Understand and apply healthcare regulations.
    - Ensure compliance with legal and regulatory standards.
    - Reflect on the impact of regulations on patient safety.
- **Interdisciplinary Collaboration:** Effective collaboration with professionals from various disciplines is necessary to achieve optimal patient outcomes. Students should develop skills in working within interdisciplinary teams to enhance patient care.
    - Collaborate with interdisciplinary teams in patient care.
    - Contribute to interdisciplinary case discussions.
    - Reflect on the impact of interdisciplinary collaboration on patient outcomes.

Competency 7: Digital & Artificial Intelligence Literate

The "Digital & Artificial Intelligence Literate" competency prepares students to navigate the rapidly evolving landscape of digital health and artificial intelligence. Students are trained to use AI-based systems ethically and effectively in diagnosis and decision-making, ensuring that technological advancements are integrated into patient care responsibly.

- **Technology and AI-Based Diagnosis and Decision-Based Systems:** Students should be proficient in using technology and AI tools for diagnosis and decision-making, ensuring that these tools enhance patient care.
    - Use AI-based tools for diagnosis.

    - Evaluate the effectiveness of technology in clinical decision-making.
    - Integrate digital tools into patient care responsibly.
- **Ethical Usage of AI:** Ethical considerations are paramount when using AI in healthcare. Students must understand the ethical implications of AI and ensure that its application respects patient rights and autonomy.
    - Identify ethical issues in AI usage.
    - Apply ethical principles to AI-based decisions.
    - Reflect on the impact of AI on patient care.

This framework ensures that undergraduate medical students at Rawalpindi Medical University are well-prepared to excel as competent, ethical, and compassionate healthcare professionals. By meeting these competencies and their corresponding learning objectives, students will be equipped to navigate the complexities of modern medical practice and contribute meaningfully to patient care and community health.

Outcomes

Outcomes 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.

Contextualization in the curriculum

It involves incorporating both local needs and global standards. This ensures the curriculum's relevance to the local community while adhering to international benchmarks. For health professionals, this is crucial as it equips students to effectively serve diverse populations in real- world healthcare settings.

Content identification, contextualization, and validation during curriculum development require a balanced consideration of local and global requirements, overseen by relevant leaders and experts. To this end, Rawalpindi Medical University has engaged subject experts and medical educationists, planning to incorporate feedback from local stakeholders to address the current needs effectively.

In Pakistan, the shift towards contextualization is essential, particularly due to the country's unique healthcare challenges like infectious diseases, malnutrition, and maternal and child mortality, compounded by socioeconomic factors. The prevalence of various diseases, limited healthcare resources, and cultural diversity necessitate a customized approach to medical education.

Contextualizing the curriculum is expected to positively influence graduate performance. By blending basic and clinical subjects, introducing early clinical exposure, and emphasizing practical, context-aware learning, graduates will be better equipped to tackle health challenges in their communities, enhancing their competence, confidence, and ability to deliver high-quality healthcare.

Context Facets of Curriculum 2024 at Rawalpindi Medical University

Rawalpindi Medical University adheres to globally recognized best practices in curriculum development. The Department of Medical Education at RMU has structured the process of syllabi identification, thematic structuring, content validation, and contextualization. This process integrates existing teaching and learning practices with global recommendations for change.

Key perspectives for the context of change include:

•The exponential growth in course content due to educational advancements, technological innovations, and scientific discoveries requires prioritization, removal of outdated concepts, and modern information transfer methods.

•Evolving societal expectations of healthcare workers necessitate balancing patient satisfaction with health system responsiveness. The curriculum should address societal needs, healthcare access, resource equity, and system awareness.

•The post-pandemic era's shift towards hybrid learning and online methodologies necessitates a curriculum that accommodates these new educational paradigms.

•The curriculum revision is aligned with global standards of Basic Medical Education and conforms to national regulations, ensuring international recognition and employability.

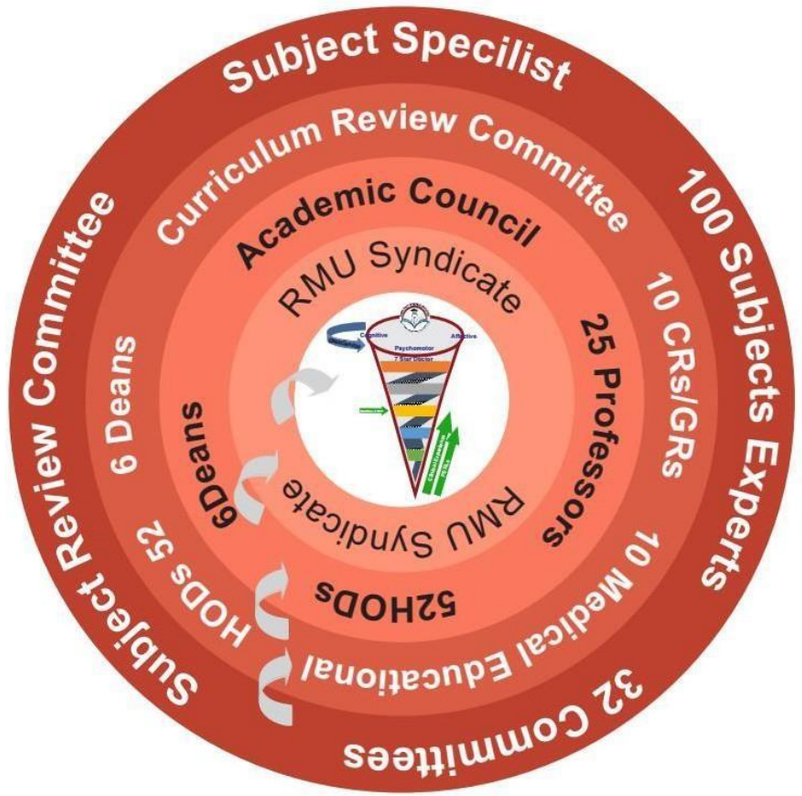
•The curriculum incorporates training in the affective domain to address societal expectations, legal awareness, and community interaction. This includes a dedicated ‘spiral’ for affective training, with assessments for the ‘PERLs’ domain.

•Student-centered approaches, such as Problem-Based Learning, electives, self-directed learning, and portfolio development, empower students in their educational journey.

Process of Curriculum Development

The curriculum development process at Rawalpindi Medical University was an intricate and well-orchestrated endeavor, meticulously designed to create an advanced and relevant curriculum. This process maintained a strong linkage with existing educational norms and professional practices while introducing innovative elements. Here's a more detailed breakdown of the process:

1. **Syllabi Development and Expert Consultation**: The first stage involved the formation of subject-specific advisory committees, engaging over 34 experts. Each committee focused on curating and refining the syllabi for their respective subjects. Their primary task was to incorporate all critical elements pertinent to each subject while discarding any obsolete or irrelevant content.
2. **Curricular Committee Review**: The next phase brought together a 26-member Curricular Steering Committee, consisting of medical educationists This committee played a pivotal role in scrutinizing and endorsing the overarching structure for a 'Modular Integrated Curriculum' spanning five years. Their focus areas included the identification and placement of modules, clerkship planning, and ensuring that the curriculum aligned seamlessly with various assessment techniques.
3. **Theme Identification and Modular Design**: In this phase, 18 medical educators engaged in a dynamic and collaborative exercise. They meticulously arranged syllabi elements into specific modules according to these themes. This step was crucial in determining the topics for each learning objective and allocating appropriate hours for each curriculum component.



Curriculum Development Process

4. **Finalization of Modules**: A select group comprising Lead Medical Educationists and members from the Department of Medical Education undertook the final step of module finalization. This involved setting the structure, themes, time allocation, syllabi content, and emphasizing clinical relevance for each module.
5. **Statutory Approval and Integration**: The finalized modules and their associated assessment policies underwent a rigorous approval process through the Academic Council, and the Syndicate. Feedback and recommendations gathered during this statutory process were meticulously integrated into the curriculum guidelines.

6. **Adaptive and Feedback-Oriented Approach**: Recognizing the importance of adaptability and continuous improvement, the university incorporated a system for regular feedback and curricular evaluations. This system ensures that the curriculum remains dynamic, accommodating necessary updates and refinements as needed.

7. **Curriculum 2024 - A Modular Integrated Outcome-Based Approach**: The developed Curriculum is a testament to a comprehensive, outcome-based educational strategy. This strategy enables affiliated colleges to implement the curriculum effectively, respecting each institution's unique identity and vision, despite variations in available resources.

8. **Integrative and Contemporary Educational Strategies**: The curriculum emphasizes both horizontal integration across various disciplines and vertical integration throughout different educational stages. This integrative approach is in line with modern educational theories, like Meizrow's concept of transformative learning and strategies for early clinical exposure. Such an approach is aimed at promoting professional growth and practical knowledge application among students.

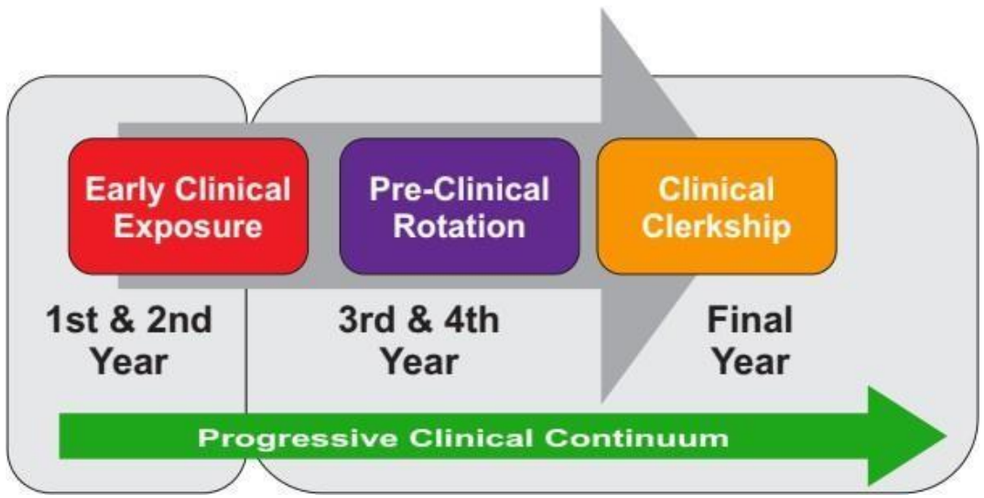
In essence, the curriculum development at Rawalpindi Medical University was a detailed, step-by-step process involving extensive expert input, iterative refinement, and a focus on adaptability and modern educational practices

Curricular Organization and Structure

RMU will follow the Correlation approach, corresponding to level 7 of Harden's levels of integration. The emphasis remains on disciplines or subjects, with subject-based courses occupying most of the curriculum time. Within this framework, an integrated teaching session or course is introduced, in addition to the subject-based teaching. This session brings together areas of interest common to each of the subjects. Although the teaching is discipline-based, topics are correlated and taught within a clinical context for better understanding and application of concepts. However, clinical teaching increases gradually with advancing years. The fifth year of the MBBS program is dedicated to clerkships.

Integrated Curriculum Design of RMU MBBS Program

Two designs of the MBBS curriculum are acceptable by PMDC. System Based (Preferred) with horizontal and vertical integration. The curriculum of each Clinical Discipline must emphasize—Health Promotion and Disease Prevention‖, besides Curative Health Care. RMU has opted for system based modular curriculum.

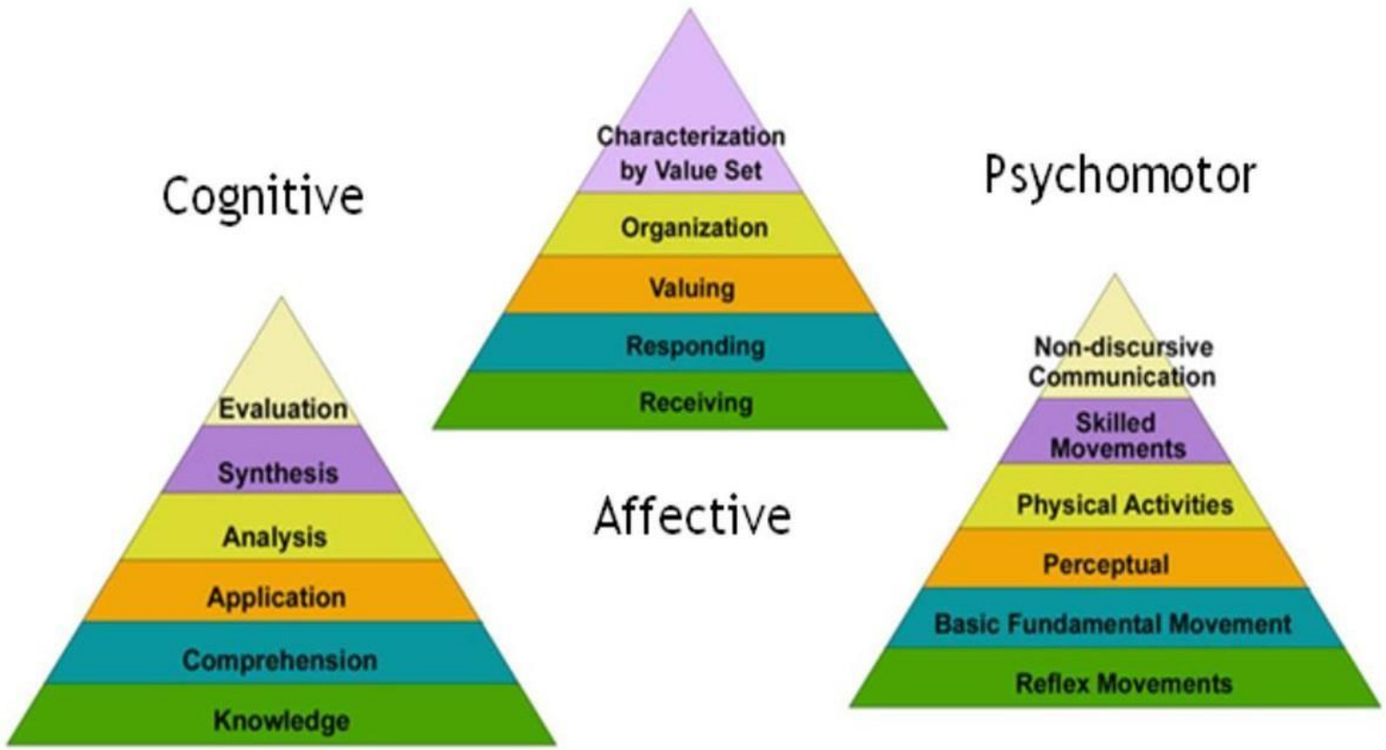


The Module: Module is the smallest unit of Curriculum both in the System- Based and Subject-Base (topic-based) Curricula. Modules are taught as a continuous block or as a longitudinal theme and assessments is carried out at the end of each module. The System-Based Curriculum made up of ―Modules, where each module is based upon organ-system(s) of the body. In each module, the Basic and Clinical Sciences are taught and learned in an integrated fashion in RMU we are following the system-based curriculum.

The Module should explicit makes:

Title of Module of a System 2) Learning Objectives, 3) Allocated Time in weeks/Hours and Credit Hours, 4) the name of the Coordinator, 5) Teaching Faculty (regular/visiting) 6) Learning Sites, 8) Modes of Information Transfer, 9) List of the Recommended Books, 10) Assessment strategies, and 11) Strategies for Monitoring and Improvement.

Learning Objectives: Learning Objectives are defined for each module. They are Specific, Measurable, Achievable, Relevant to the desired competencies (Outcomes) of the PMDC Curriculum and Time bound (SMART), related to level of the learner and the three main domains.



Level of the Learner: While developing the curriculum, the learning objectives are according to the desired level of the learner, and the assessment systems must assess the knowledge, skills and attitudes to be achieved for that level.

a. The RMU MBBS curriculum in the first four years will be delivered in a System-Based Modular Format with clinical relevance and early clinical Exposure. However, in the third and fourth years, students will gain clinical exposure through rotations in the wards and outpatient departments (OPDs), and in the fifth year through clerkships.

b. The curriculum will be delivered by modular teams consisting of multidisciplinary basic science faculty and relevant clinical faculty.

d. The planning and delivery will be coordinated by Module Team who will guide module coordinators of their respective modules for efficient implementation.

e. The Modular Coordinator will be responsible for teaching and assessment during each module. The coordinator will be appointed by the Heads of Departments (HODs) in coordination with the Health Professions Education (HPE) team.

f. The Clinical Coordinator will be responsible for placement, teaching, and assessment during clinical rotations

The Theoretical Frameworks Shaping the RMU Integrated Modular Curriculum

The Changing concept of Curriculum in Medical Education

The way medical curricula are structured and taught has undergone significant changes in recent decades. New approaches to education have resulted in a more cohesive curriculum that emphasizes the teacher's role as a facilitator of learning rather than a source of information. Students are now seen as active participants in the learning process rather than mere recipients of knowledge. The responsibility for curriculum planning has shifted from individual departments to committees representing different stakeholders. Key issues that need to be addressed include the mission of the medical school, learning outcomes, curriculum content, course sequence, educational strategies, teaching and learning methods, assessment procedures, educational environment, communication about the curriculum, and management of the process. The SPICES model describes a range of educational strategies that move from student-centered to teacher-centered, problem-based to information-centered, integrated to discipline-based, community-based to hospital-based, and from electives to uniform and systematic to opportunistic. (Figure-1)

Spices Model of Educational Strategies

(Essential Skills For A Medical Teacher, Second Edition, Ronald M. Harden)

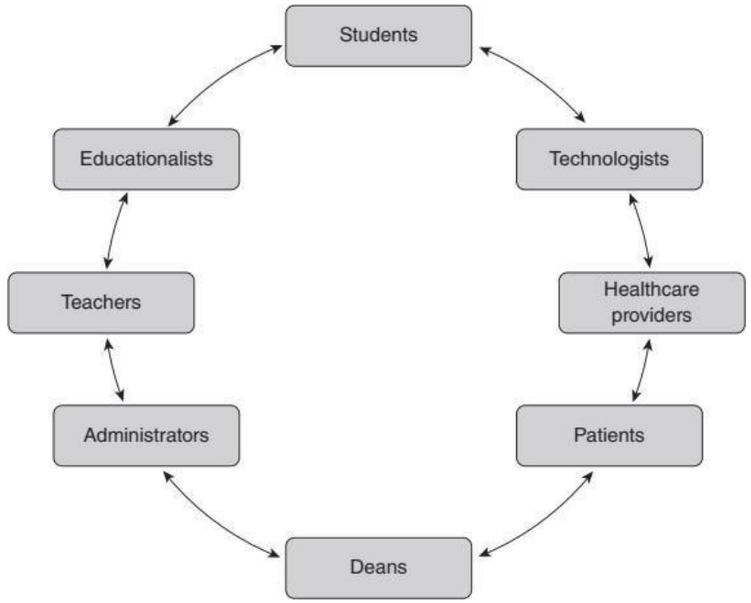
Creating an Authentic Curriculum

The concept of an authentic curriculum in medical education is gaining importance worldwide. In line with this, Rawalpindi Medical University has also made efforts to create a curriculum that is relevant and responsive to the needs of society and the healthcare system. The university has recognized the need for medical education to keep pace with the changing healthcare landscape, and has adopted an outcome- or competency-based approach to education. This means that the curriculum is designed to produce graduates who are not only knowledgeable but also equipped with essential clinical skills, communication skills, and professionalism. To achieve this, the university has incorporated learning outcomes such as Leadership, Professionalism, Communication skills, Research skills and Bioethics in addition core objectives. Regular Case Based and Problem based learning sessions developed with a local context develops the ability of translating theory to practice since undergraduate years. By adopting an authentic curriculum, Rawalpindi Medical University aims to ensure that its graduates are well-prepared to practice effectively for the benefit of their patients and the community at large.

Collaborative Activities in the Curriculum

Rawalpindi Medical University recognizes the importance of collaboration in enhancing medical education. In order to achieve this, the university has established a collaborative approach among different stakeholders, including students, faculty, healthcare professionals, and the community.

One of the ways that Rawalpindi Medical University fosters collaboration is by implementing horizontal and vertical integration in the medical curriculum on the continuum of the integration ladder. (Figure 2) By integrating subjects that are normally taught in the same phase of the curriculum, such as anatomy, physiology, biochemistry, surgery, paediatrics, obstetrics, and gynecology, students gain a more comprehensive understanding of medical concepts. Moreover, students are introduced to patients from the first year of the curriculum, allowing them to apply their knowledge in clinical settings.



In addition, the university believes that collaboration should extend beyond the different subject experts working together to deliver an integrated program. All stakeholders, including students, faculty, healthcare professionals, and the community, should work together in the planning and implementing of a curriculum. (Figure 3) They collaborate in specifying learning outcomes, planning the approaches to teaching, learning, and assessment, and evaluating the effectiveness of the program.

The stakeholders in curriculum development.

(Mennin, Stewart, and Ronald Harden. Routledge international handbook of medical education., 2016. Pg 120)

Furthermore, Rawalpindi Medical University recognizes that collaboration is necessary across the different phases of education, including undergraduate, postgraduate, and continuing education. By breaking down silos and fostering communication between these different phases, the university ensures a higher level of collaboration and progress. This collaborative approach to medical education ensures that students graduate with the necessary skills and knowledge to meet the changing needs of the community.

The Involved Student

In Rawalpindi Medical University, students play a crucial role in the curriculum. There has been a shift in the perception of the student's role, where they are no longer seen as mere products of the education system, but as active partners in the learning process. The focus is on student-centered learning, where the emphasis is on what the students learn rather than what the teachers teach.

To facilitate this, the university provides study guides and clear statements of the expected learning outcomes, encouraging students to take responsibility for their own learning. The university also supports personalized adaptive learning, recognizing that each student is different in terms of their abilities, previous experiences, learning styles, and aspirations.

The university has implemented various strategies, including problem-based learning, case-based learning, peer-to-peer learning and flipped classrooms, to support student-centered learning. Students are also actively engaged in the educational program, serving on committees, participating in policy decisions, and shaping the teaching and learning experience.

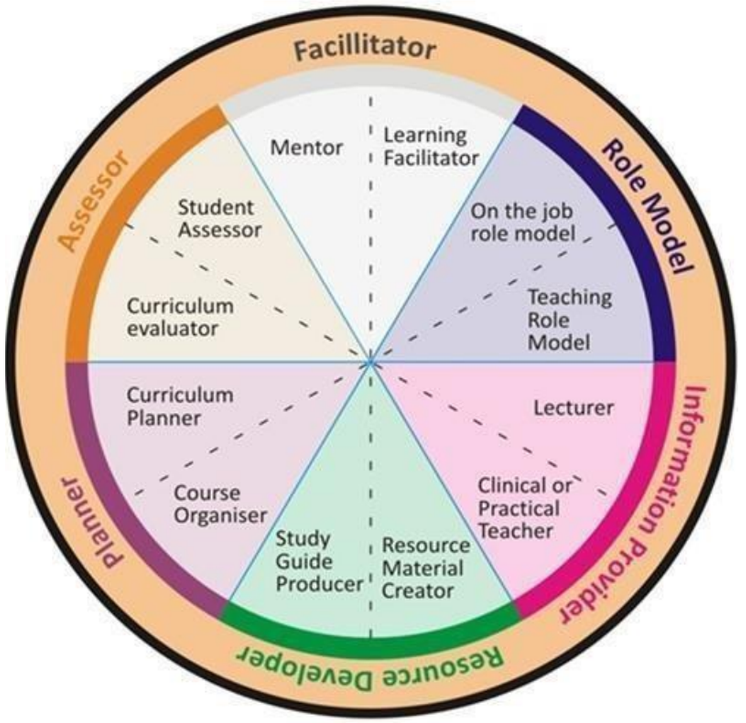
In Rawalpindi Medical University, students have the opportunity to engage in the research program, representing the school and contributing to national and international education seminars. They may also be involved in the delivery of the teaching program as peer teachers or developers of learning resources. Overall, students in Rawalpindi Medical University are valued partners in the learning process, actively engaged in shaping their educational experience.

A broader role of Teachers

Rawalpindi Medical University places great importance on the role of the teacher in the success of a curriculum. We understand that the input of the teacher is as significant, if not more significant, than the design of the curriculum itself. Therefore, we prioritize the training and development of our faculty through a regular faculty development program to ensure that they are equipped with the necessary knowledge and skills to effectively teach our students.

Our teachers play multiple roles in the curriculum, including that of information provider, role model, facilitator of learning, assessor of student progress, and curriculum planner. (Figure 4) They are not simply lecturers, but rather mentors and guides who help our students navigate the complex world of medicine. They work tirelessly to create an educational environment that supports the learning of our students and encourages appropriate learning behavior.

Our teachers also serve as facilitators of learning, guiding our students to access, select, and evaluate a wide range of resources that will help them achieve their learning outcomes. They work with individual students to support, motivate, and inspire them, promoting a sense of ownership of the course and their studies.



12 Roles of a Medical Teacher *(adapted from Harden, R.M., Crosby, J.R., 2000. AMEE Educational Guide No. 20)*

As assessors of student progress, our teachers monitor the progression of our students through the curriculum, identifying any problems related to their progress and guiding their studies to meet their individual needs. They provide feedback and support to students who may require remedial teaching, as well as guidance to those who have mastered a topic and are ready to explore more advanced areas.

Finally, our teachers are integral to the development of our authentic curriculum, which mirrors the mission of our medical school and relates to the needs of our community. They work collaboratively to ensure that our curriculum is up-to-date, relevant, and responsive to the changing landscape of healthcare.

At Rawalpindi Medical University, we recognize the critical role that our teachers play in the success of our curriculum and, ultimately, in the success of our students. We are committed to providing them with the training, resources, and support they need to continue to be effective mentors, guides, and role models for our future medical professionals.

SECTION-IV

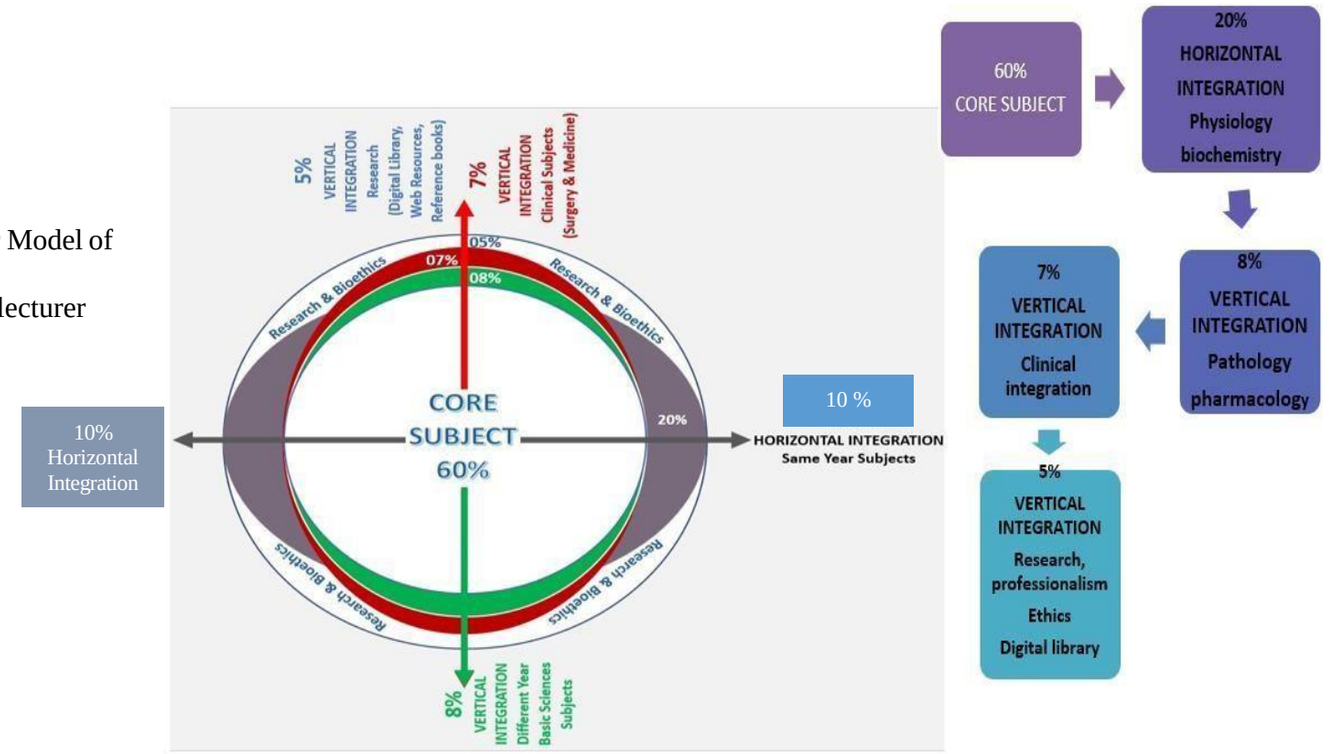
Teaching and Learning Methodologies / Strategies

- **Large Group Interactive Session (LGIS)**
- **Case Based Learning (CBL)**
- **Skill Labs/Practicals (SKL)**
- **Bed side teaching**

Teaching and Learning Methodologies / Strategies

Large Group Interactive Session (LGIS)

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



Prof Umar's Model of Integrated Lecture

Table 2. Standardization of teaching content in Small Group Discussions

Table 3. Steps of Implementation of Small Group Discussions

Practical Sessions/Skill Lab (SKL)

Demonstration/ power point presentation 4-5 slide	10-15 minutes
Practical work	25-30 minutes
Write/ draw and get it checked by teacher	20-25 minutes
05 mcqs at the end of the practical	10 minutes
At the end of module practical copy will be signed by head of department	
At the end of block the practical copy will be signed by Head of Department, Dean, Medical education department, QEC	

Learning (Case Based CBL)

It's a learner centered model which engages students in discussion of specific scenarios that typically resemble 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.

BED SIDE TEACHING (BST)

Bedside teaching is a fundamental component of clinical training and an essential tool in the creation of a competent physician. It allows the students to learn clinical skills,clinical reasoning ,physician-patient communication, empathy, and professionalism.

cases are allocated to students at the start of their ward rotation.

They prepare their cases according to the schedule under supervision of senior registrar of wards. They

present the cases in consultant class.

SECTION-V

Structured Framework of
Clinically Oriented Integrated Modular Curriculum 2024

Introduction

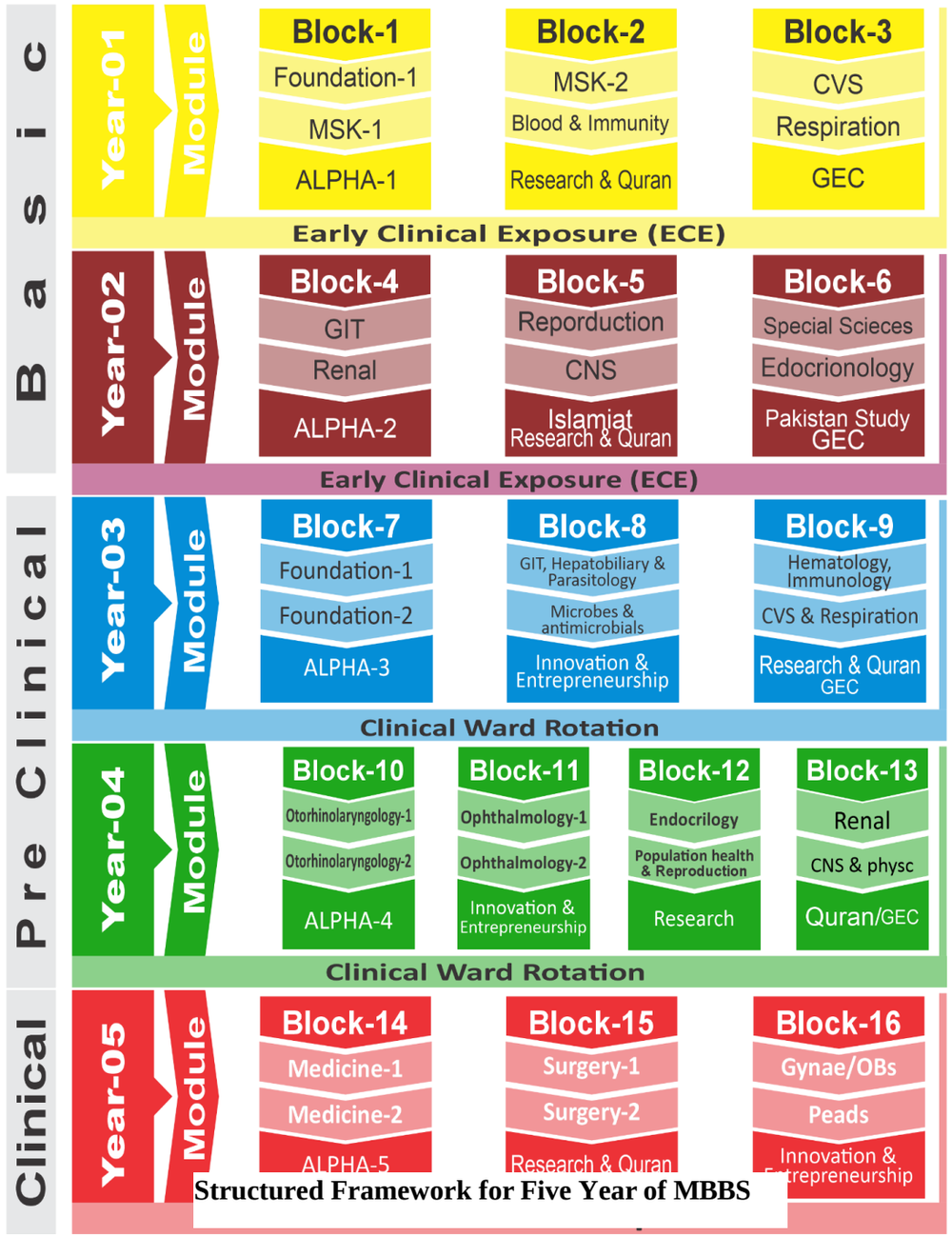
The final year of the Bachelor of Medicine, Bachelor of Surgery (MBBS) program is a crucial phase in the medical education journey. It marks the transition from the theoretical knowledge and preclinical subjects to hands- on clinical practice, preparing students for their future roles as a doctor. During this year, students will immerse themselves in clinical clerkships, which provide invaluable opportunities to engage with patients, collaborate with healthcare teams, and apply theoretical knowledge in real-world scenarios.

The curriculum is designed to enhance students' clinical reasoning and diagnostic skills through a combination of hands-on experiences and structured learning. Clinical clerkships will cover a range of specialties, allowing students to observe and participate in patient care under the guidance of experienced clinicians. This experiential learning is complemented by classroom-based education, where students will study relevant clinical topics, engage in case discussions, and develop critical thinking abilities.

Emphasizing the importance of compassionate patient care, ethical practice, and effective communication, this curriculum aims to prepare students for the complexities of modern medicine. By the end of the final year, students will have gained essential clinical skills and a deeper understanding of patient-centered care, laying a strong foundation for their subsequent years of training and future practice as medical professionals.

Through this integrated approach, we aspire to cultivate competent, empathetic, and reflective practitioners who are equipped to meet the challenges of the healthcare landscape.

The main subjects in final year are Medicine and Allied,Surgery and Allied,Gynae/Obs and Paediatrics. It will be taught in three blocks.The whole of final year is divided into three parts. Each will go through one block at a time and each block will be repeated after 12 weeks,three times a year as session 1,2 and 3.



Structured Framework for Five Year of MBBS

Structured Framework of Clinically Oriented Integrated Modular Curriculum 2024

Sr. No	Class	Module	Duration	Block
1.	First Year MBBS	Foundation Module	6 weeks	Block-I
		MSK-I Module	5 weeks	
		MSK-II Module	5 weeks	Block -II
		Blood & immunity Module	5 weeks	
		CVS Module	6 weeks	Block -III
		Respiration Module	5 weeks	
		General Education Cluster Module	1 week	
2.	Second Year MBBS	Gastrointestinal tract Module	5 weeks	Block-IV
		Renal module	5 weeks	
		Reproduction Module	4 weeks	Block -V
		Central nervous system module	6 weeks	
		Special Senses Module	4 weeks	Block -VI
		Endocrinology Module	5 weeks	
3.	Third Year MBBS	Foundation 1	4 weeks	Block- VII
		Foundation II	4 weeks	
		GIT, Hepatobiliary & Parasitology	5 weeks	Block - VIII
		Microbes & Antimicrobials	7 weeks	
		Hematology, Immunology & Research	5 weeks	Block - IX
		CVS & Respiration	5 weeks	
4.	Fourth Year MBBS	Otorhinolaryngology 1	2.5 weeks	Block- X
		Otorhinolaryngology II	3 weeks	
		Ophthalmology I	2.5 weeks	Block - XI
		Ophthalmology II	3 weeks	
		Endocrinology	5 weeks	Block -XII
		Population Health & Reproduction	6 weeks	
		Renal	4 weeks	Block – XIII
		CNS & Psychiatry	6 weeks	
5.	Final Year MBBS	Medicine & Allied	12 weeks	Block- XIV
		Surgery & Allied	12 weeks	Block- XV
		Gynae & Peads	12 weeks	Block- XVI

Final Year Contact Hours Paediatric Medicine

Teaching hours – Paeds

Total 309 Hours across five years

Session	Year	Contact Hours
2020-2021	I	08
2021-2022	II	10
2022-2023	III	14
2023-2024	IV	105
2024-2025	V	174

*Note: All dates are subject to change.

ACADEMIC CALENDAR Session 2021-2022

2024	2024-25														
	February			March					April						
	12	17	26	9	12	13	15	31	8	10	14	16	17	22	30
	Block I												Block II		
3rd YEAR	Foundation Module-I				Module Exam	Foundation Module-II				Eid ul Fitar		Block Exam II	GIT HEPATOLOGY & PARASITOLOGY MODULE	Sports Week+ Spring Vacations	

2024	2024-25												
	May					June				July			
	5	8	21	27	30	3	5	17	24	3	24	18	30
3rd YEAR		GIT HEPATOLOGY & PARASITOLOGY MODULE (Conti)				Module Exam	MICROBES & ANTIMICROBIALS		Summer Vacations			MICROBES & ANTIMICROBIALS (Conti)	

2024	2024-25													
	August					September					October			
	1	5	13	16	17	6	24	26	27	30	10	21	23	31
					Block III									
3rd YEAR				Block Exam II	Hematology & Immunology Module			Module Exam	CVS & RESPIRATION MODULE					

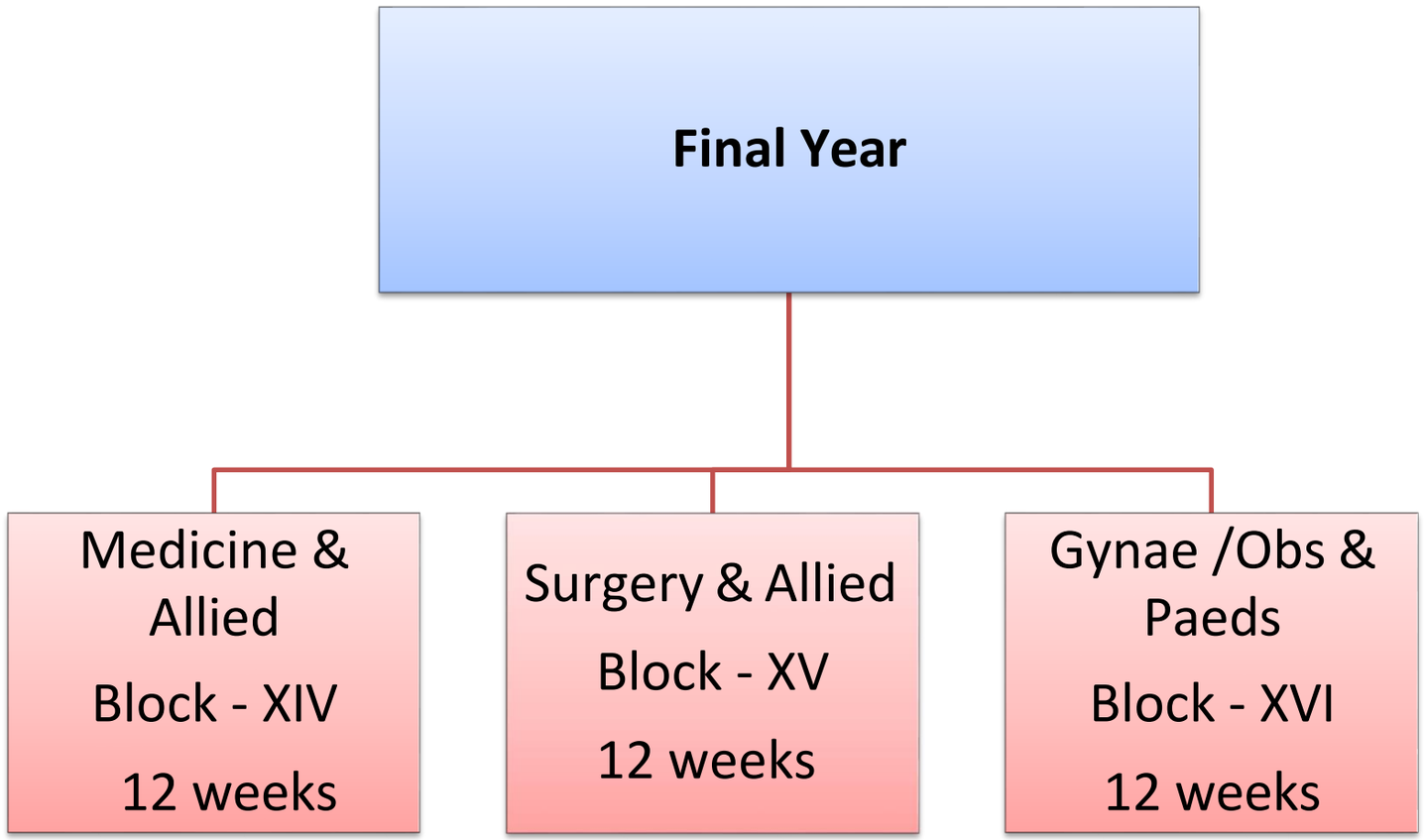
2024	2024-25										
	November						December				
	3	11	12	13	17	21	18	25	2	3	23
		Preparation Leaves									
3rd YEAR	Block Exam III	Preparation Exam Break	GEC Module	Sendup Block Exam I	Sendup Block Exam II	Sendup Block Exam III	Annual Prof		Final Prof Result 2025		

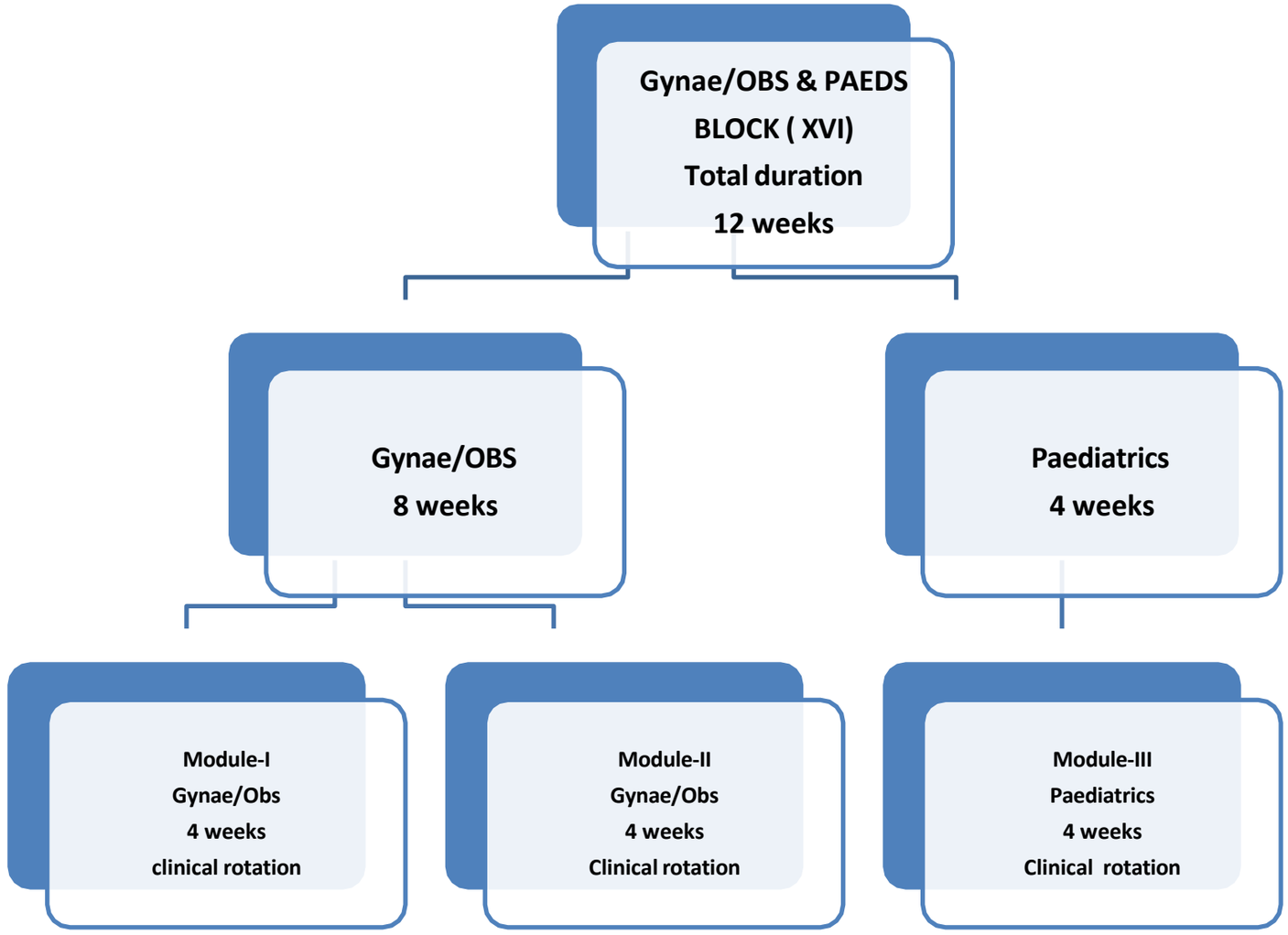
Prepare by DME-NTB 22-1-24

Contact Hour Distribution for Paediatrics

Final Year MBBS

Blocks	Modules	LGIS	CPC	CLINICAL CLERKSHIP	EVENING CLINICAL CLERKSHIP	Total Hours
Gynae & Paeds	Paediatrics	24	12	114	24	174
Total Hours Per Subject						
Percentage						


Final Year
Medicine & Allied
Block - XIV
12 weeks
Surgery & Allied
Block - XV
12 weeks
Gynae /Obs & Paeds
Block - XVI
12 weeks


Gynae/OBS & PAEDS
BLOCK (XVI)
Total duration
12 weeks
Gynae/OBS
8 weeks
Paediatrics
4 weeks
Module-I
Gynae/Obs
4 weeks
clinical rotation
Module-II
Gynae/Obs
4 weeks
Clinical rotation
Module-III
Paediatrics
4 weeks
Clinical rotation

PAEDIATRICS CLERKSHIP HOURS

LGIS	**Schedule Duration** Monthly	**Schedule Duration** Total 3 months
Interactive LGIS	2 days a week = 8 hour/month	24 hour
CPC	once a week = 4 hours/month	12 hours
Total		**36 Hours/3month**
CLINICAL CLERKSHIP	**Schedule Duration** Monthly	**Schedule Duration** Total 1month clinical rotation(4weeks
Clinical Clerkship in Wards	4.5hrs/day & 6days a week = 108 hrs/month 2.5 hrs/ Friday= 10hours/month	118 hours/month
Shadowing Resident in Paeds critical care areas Evening hours	2.5 hours, Two times a week= 5x 4 = 20 hrs	20 hrs hours
Clinical Clerkship		**138 hours**
TOTAL CLINICAL CLERKSHIP		**174 hrs**

SECTION-VI

LEARNING OUTCOMES

OF

LARGE GROUP INTERACTIVE SESSION

TABLE OF SPECIFICATION (THEMES/TOPICS/LEARNING OUTCOMES/EDUCATIONAL STRATEGIES

THEME	TOPIC	Specific learning object (SLO) At the end of the Session student should be able to	Teaching strategy	Level of cognition			Assessment tools
				C1	C2	C3	
CYANOTIC CONGENITAL HEART DISEASES	**TERATOLOGY OF FALLOT (TOF)** **TRANSPOSITION OF GREAT ATERIES(TGA)**	Enlist and classify CHD Discuss clinical features and enlist investigations Name the complications Differentiate b/w different CHD Outline Management plan Prognosis of CHD Medical ethics b Recent research article relevant	LGIS PPT		√		MCQs, SEQs
ACYANOTIC CONGENITAL HEART DISEASE	**VENTRICULAR SEPTAL DEFECT** **PATENT DUCTUS ARTERIOSIS**	Enlist and classify CHD Discuss clinical features and enlist investigations Name the complications Differentiate b/w different CHD Outline Management plan Prognosis of CHD Medical ethics Recent research article relevant	LGIS PPT		√		MCQs, SEQs
RENAL DISORDERS	**NEPHROTIC SYNDROME** **AND** **ACUTE POST STREPTOCOCCAL GLOMERULONEPHRITIS**	Define nephrotic syndrome and AGN Discuss the clinical presentation Differentiate nephrotic syndrome from acute Post Streptococcal glomerulonephritis Plan pertinent investigation, interpret, and take appropriate action Name the complications	LGIS PPT		√		MCQs, SEQs

		Manage disease and its complications					
RENAL DISORDERS	**RENAL FAILURE (ACUTE AND CHRONIC**	Define acute and chronic renal failure Know the common etiology Know the stages of acute and chronic renal failure Know the common clinical presentation Know the common complication Know the management plan and management of complication	LGIS PPT		√		MCQs, SEQs
METABOLIC DISORDER	**INBORN ERROR OF METABOLISM**	Significance of metabolic disorders Common metabolic disorders (Glycogen storage disease, Galactosemia, PKU, Gaucher disease, MPS) and their clinical presentation Relevant investigation and their management	LGIS PPT		√		MCQs, SEQs
NEONATOLOGY	**PERINATAL/ BIRTH ASPHYXIA**	Define asphyxia risk factor Enlist perinatal asphyxia To be familiar with APGAR score Enlist common complications of perinatal asphyxia To be familiar with SARNOT STAGING of Perinatal asphyxia Treatment options of perinatal asphyxia	LGIS PPT		√		MCQs, SEQs
NEONATOLOGY	**NEONATAL JAUNDICE**	Enlist common causes of unconjugated and conjugated hyperbilirubinemia at different days of	LGIS PPT		√		MCQs, SEQs

		life Enlist investigations Know indications of phototherapy and exchange transfusion Enlist complications Manage according to cause					
NEONATOLOGY	**NEONATAL SEPSIS**	Define neonatal sepsis Enlist common causative factors and risk factors Discuss clinical features Enlist investigation and their interpretation Describe treatment, identify complications and their management	LGIS PPT		√		MCQs, SEQs
NEONATOLOGY	**LBW/PREMATURITY AND RESP[IRATORY DISTRESS SYNDROME**	Define LBW babies And RDS Enlist common causes of LBW babies and RDS Enlist complications and problems of premature babies and RDS Manage prematurity RDS and its complications	LGIS PPT		√		MCQs, SEQs
INFECTIOUS DISEASES	**ENTERIC FEVER & UTI**	Pathogenesis of enteric fever and UTI Know clinical presentation Know how to diagnose these diseases Know the importance of culture of organisms Know the common complication Know the management plan and treatment	LGIS PPT		√		MCQs, SEQs

INFECTIOUS DISEASES	**DENGUE FEVER**	Define dengue fever, dengue hemorrhagic fever, and dengue shock syndrome Discuss clinical features and identify warning signs Enlist investigations and their interpretation Appropriate monitoring and manage accordingly Advise preventive measures	LGIS PPT		√		MCQs, SEQs
INFECTIOUS DISEASES	**MEASLES AND DIPTHERIA**	Pathogenesis of the disease Know clinical presentation Know how to diagnose these diseases Know the importance of vaccination in prevention Role of EPI VACCINATION in prevention Know the common complication Know the management plan and treatment	LGIS PPT		√		MCQs, SEQs
GIT	**CHRONIC DIARRHOEA (CELIEC DISEASE)**	Pathogenesis of the chronic diarrhoea and celiac disease Know clinical presentation and common causes	LGIS PPT		√		MCQs, SEQs

		Of chronic diarrhoea in children Know how to diagnose these diseases Know the importance of gluten free diet in prevention Of celiac disease Know the common complication Know the management plan and treatment					
GIT	**ACUTE DIARRHOEA**	Pathogenesis of the ACUTE diarrhoea and Know clinical presentation and common causes Of acute diarrhoea in children Know how to classify dehydration Hydration plan according to dehydration Know the common complication Know the management plan and treatment	LGIS PPT		√		MCQs, SEQs
NEUROLOGY	**EPILEPSY**	Define and enumerate the causes of epilepsy Classify and discuss its clinical presentation Investigations and their interpretation Manage epilepsy and status epilepticus Counsel the parents/patient and plan	LGIS PPT		√		MCQs, SEQs

		follow-up					
NEUROLOGY	**NEONATAL SEIZURES**	Define neonatal seizures Enlist common causes Describe clinical types Enlist investigations Management according to causes and follow-up	LGIS PPT		√		MCQs, SEQs
NEUROLOGY	**CEREBRAL PALSY**	Define cerebral palsy Know the etiology and classification Describe different clinical presentations Discuss the differential diagnosis Manage with a multi-disciplinary approach	LGIS PPT		√		MCQs, SEQs
HEMATOLOGY	**THALASSEMIA**	Know the pathogenesis of thalassemia Know the genetics of thalassemia Know clinical features of thalassemia How to diagnose In children Know common complication and management plan Discuss genetic counselling	LGIS PPT		√		MCQs, SEQs
HEMATOLOGY	**NUTRITION ANEMIA**	Know the pathogenesis of nutritional anemia Know the common causes like iron deficiency etc Know clinical features of anemia How to diagnose In children Know common complication and management plan	LGIS PPT		√		MCQs, SEQs

		Discuss role of nutrition in prevention of anemia					
HEMATOLOGY	**APLASTIC ANEMIA**	Know the pathogenesis of Aplastic anemia Know the common causes like Fanconi etc Know clinical features of aplastic anemia How to diagnose aplastic In children Know common complication and management plan	LGIS PPT		√		MCQs, SEQs
NUTRITION	**MALNUTRITION**	Define malnutrition in children Use of anthropometry and centile charts in assessment of malnutrition know causes of malnutrition common clinical features and common complication know the management plan and treatment of malnutrition	LGIS PPT		√		MCQs, SEQs
NUTRITION	**RICKETS**	How to diagnose rickets in children Use of anthropometry and centile charts in assessment of malnutrition and rickets know different types of rickets common clinical features and common complication know the management plan and treatment of rickets	LGIS PPT		√		MCQs, SEQs
ENDOCRINOLOGY	**SHORT STATURE & HYPOTHROIDISM**	Define short stature Enlist common causes and their presentation Demonstrate anthropometric measurements Enlist investigations and their	LGIS PPT		√		MCQs, SEQs

		interpretation Manage according to cause and plan follow-up					
PULMONOLGY	**ASTHMA**	Define asthma Enlist risk factors and discuss clinical presentation Classify as per GINA guidelines Make differentials Enlist investigations and their interpretation Manage acute attack	LGIS PPT		√		MCQs, SEQs
PULMONOLGY	**PNEUMONIA & BRONCHIOLITIS**	How to diagnose pneumonia and bronchiolitis Common clinical features Classification of pneumonia according to IMCI Guideline Management plan and complication in both disorder Difference between pneumonia and bronchiolitis	LGIS PPT		√		MCQs, SEQs

SECTION-VII

CLERKSHIP PROGRAM
FINAL YEAR MBBS
PAEDIATRICS

CLERKSHIP PROGRAM AT RMU

Rationale:

The final year clerkship programme is an essential component of medical education, designed to provide students with hands-on practical experience in clinical setting. It aims to bridge the gap between theoretical knowledge and real-world practice.The students shall be posted to clinical teaching units throughout the day's teaching time where they will have practical exposure of management of patients under supervision of the faculty. The main emphasis of this practical teaching will be on the common problems of our society that a doctor is most likely to face and be expected to manage as medical practitioner.

In final year MBBS students are exposed to wards and patients after getting 4 years of basic sciences and preclinical sciences training. A class is divided into 18 batches which are rotated in different wards of Medicine & Allied, Surgery & Allied and Gynae/Obs and paediatrics.

CLERKSHIP IN PEDIATRICS

Each student during the clerkship will rotate in one pediatric unit for 4 weeks. They will have duties as morning placement and evening placement.

During clinical work, students will be divided into 4 sub batches and join house officers and post graduate trainees and senior registrars at their morning stations and will closely follow their morning station routine.
On each Monday, the senior person (incharge of students) will introduce the students to postgraduate trainees and senior registrar of respective stations. Pairing will be refreshed as the morning stations of students change.

From 10:00 am to12:00 pm they will be on clinical floor in their allotted wards to participate in morning rounds and carry out orders given during round under direct supervision and assistant of postgraduate trainees and house officers. They will take history, perform examination, make list of required investigations,make D/D and provisional diagnosis. Then they will discuss cases with their PGTs/SRs. The 4 groups in batch (A,B,C,D) will rotate weekly to their work stations. There will be a bed side class by consultant from 12:00pm to 02:00pm, in which students will present allotted case histories. Students will be allotted cases and case presentation schedule at the start of their rotation.

At the end of each station, Log book with written morning station targets will be filled by each student and submitted after signature and stamp of senior registrar of respective station. This will be included in continuous internal assessment of students and will have weightage in final assessment.

TABLE OF SPECIFICATION

THEMES/TOPICS/LEARNING OUTCOMES/EDUCATIONAL STRATEGIES

PEDIATRIC CLINICAL CLERKSHIP (4 weeks)

At the end of session Student must learn:

Sr #	Specialty	Topic	SPECIFIC LEARNING OJECTIVES (SLO)			Cognition			Pyscomotor		Attitude		MOT/MIT	MOA
			Cognition	Skill	Attitude	C1	C2	C3	P1	P2	A1	A2		
1	HISTORY TAKING	HISTORY TAKING INTRODUCTION	Know the Component of demographic details Component of history of present illness,past history Components of birth history,feeding history, vaccination history,development history,family and social history student must know the all component of history taking	Able to take history including demographic details,history of presentillness,past history,birth history,feeding history, vaccination history,development history,family and social history and all relevant history	Students will be able to: Take Consent for History Can do counselling			➶		➶		➶	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE

	GENERAL PHYSICAL EXAMINATION	**GENERAL PHYSICAL EXAMINATION**	Students will be able to recall Steps of GPE Know the steps like general signs, Vital and anthropometry	Students will be able to Take history and perform GPE and relevant examination Interpretation of findings	Can take consent Must be able to introduce him/her Can counsell the patient regarding examination			➶		➶		➶	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	Long case , Short case ,OSCE
	ANTHROPOMERY CENTILE CHARTS	**GROWTH AND DEVELOPMENT**	Students will be able to recall how to define growth and development a) Take Anthropometry measurements and plot them on WHO growth chart b) Measure the caloric intake	Student will be able to a) Take Anthropometry measurements and plot them on WHO growth chart b) Measure the caloric intake	Take coconsent for Clinical examination b) Educate ients about portance of regular lowup And ssessment			➶ ➶		➶ ➶		➶ ➶	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	Long case , Short case ,OSCE
	CHRONIC COUGH (TB/ASTHMA)	**RESPIRATORY SYSTEM**	Student will be able to a) Recall etiopathogenesis b) Describe clinical features c) Suggest differential diagnosis d) Review basic management in Asthma, Pneumonia and tuberculosis	Students will be able to a) Perform history and chest examination b) able to use O2 therapy, deliver drugs . using nebulizer c)Interpret CXR d)Practice writing prescription	tudents will be able to a) Take consent for History and Clinical Examination b) Counsel and educate patient about disease, its diagnosis, treatment and management			➶		➶		➶	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	LONG CASE , SHORT CASE

2	**RESPIRATORY SYSTEM**	**SHORT CASE**	Student must know the steps of examination Know the steps of inspection, palpation, percussion and auscultation The interpretation of the findings of examination	Students will be able to: Take history and perform Respiratory system examination including inspection,palpation,percussion and auscultation of front and back of chest & relevant clinical examination according to cause Student can interpret the findings and can present the case with management plan for patient.	Students will be able to: Take Consent for History andClinical Examination Can do counselling			➶		➶		➶	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	LONG CASE , SHORT CASE MINICEX, CBD
	NEONATAL RESUSITATION	**BLS**	Student must know All steps of neonatal resuscitation and all Algorithms	Can perform resuscitation on MINIQUINS Following algorithms	Can take consent and counsell regarding steps And management			➶		➶		➶	WORKSHOP SGD	OSCE

	GENERAL PHYSICAL EXAMINATION	**EXAMINATION**	Student must know the steps of examination Know the steps of GPE including general signs ,vitals and Anthropomertry. The interpretation of the findings of examination	Must be able to perform the all steps of General Physical Examination in a patient	Can take consent Must be able to introduce him/her Can counsell the patient regarding examination			✓		✓		✓	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds	OSPE ,MINICEX ,CBD SHORT CASE
	FEVER WITH FITS	**CNS EXAMINATION**	Student must be able to Know the causes of fever and fits Know how to take detail history Know the examination steps Know the interpretation of findings	Take history and perform clinical examination Especially CNS examination	Can take consent for history and examination Can cousell attendant regarding disease and complications			✓		✓		✓	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	MOTOR SYSTEM EXAMINATION	**CNS EXAMINATION**	Student must know the steps of examination Know the steps like higher motor function, cranial nerves, motor system,sensory system, and gait examination etc The interpretation of the findings of examination	Must be able to perform the all steps of central nervous system examination in a patient	Can take consent Must be able to introduce him/her Can counsell the patient regarding examination			✓		✓		✓	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE

	FEVER WITH JAUNDICE	**GIT EXAMINATION**	Student must able to Know the Causes of fever and jaundice like acute hepatitis ,enteric fever etc Know the steps of gastrointestinal system examination Like inspection, palpation, percussion and auscultation The interpretation of the findings of examination	Must be able to perform the all steps of GPE and GIT system examination in a patient	Can take consent Must be able to introduce him/her Can counsell the patient regarding examination			✓		✓		✓	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	CHILD WITH CYANOSIS	**CVS EXAMINATION**	Student must able to Know the Causes of cyanosis like congenital heart diseases etc Know the steps of cardiovascular system examination Like inspection, palpation, percussion and auscultation The interpretation of the findings of examination	Must be able to perform the all steps of GPE and CVS examination in a patient	Can take consent Must be able to introduce him/her Can counsell the patient regarding examination			✓		✓		✓	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	CVS EXAMINATION	**EXAMINATION SHORT CASE**	Know the steps of cardiovascular system examination Like inspection, palpation, percussion and auscultation The interpretation of the findings of examination Especially finding of auscultation	Must be able to perform the all steps CVS examination in a patient	Can take consent Must be able to introduce him/her Can counsell the patient regarding examination			✓		✓		✓	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE

	IMCI GUIDELINES	**PREVENTIVE MEDICINE**	Student must be able to Know the importance of IMCI guidelines Know the guidelines for common childhood illness like pneumonia and diarrhoea must know the interpretation of these guidelines	Apply guidelines by examination of patients and must interpret the guidelines	Take consent and can cousell the attendant			✓		✓		✓	SGD	OSCE
	MALNUTRITION	**NUTRITION**	Students will be able to recall a) Causes of malnutrition b) Suggest its types and classification	Students will be able to a) Take history, detailed GPE and relevant examination	tudents will be able to a) Take consent for History and Clinical Examination b) Consent for procedure and explain its complications.			✓		✓		✓	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE

		PYREXIA OF UNKNOWN ORIGIN	**INFECTIOUS DISEASES**	Student must be able to Know the causes of pyrexia of unknown origin Know how to take history and examination of patient Presenting with PUO	Take history and perform relevant clinical examination in a patient Must interpret the findings of history and examination	To introduce and counsel the patient and attendants			➹		➹		➹	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
		LAB DATA INTERPRETATION **(CBC, LFTS, RFTS**	**DATA INTERPRETATION**	Students will be able to recall a) Causes of Dearranged labs b) Suggest differential diagnosis c) Components of CBC, LFTS, RFTS	Students will be able to a) Withdraw samples of CBC, LFTS, RFTS b) Able to differentiate b/w CP and serum vials	Students will be able to a) Take consent for History and Clinical Examination and Sampling			➹		➹		➹	SGD WARD LAB	OSCE
		CLINICAL PICTURES	**DATA INTERPRETATION**	**Student must know common diseases with pictures** Know common clinical features , diagnosis and management	**Student must be able to** Identify common diseases with pictures Can identify common clinical features and Mention regarding diagnosis and management				➹		➹		➹	PPT/SGD	OSCE

	OEDEMA	**EXAMINATION**	Students will be able to recall a) Causes of edema b) To make differential diagnosis c) Suggest management steps	Students will be able to a) Take history and perform GPE and relevant examination b) Interpret urine R/E c) Practice treatment plan	Students will be able to a) Take consent for History and Clinical Examination b) Counsel and educate patient about disease, its diagnosis, duration of treatment and management			✓		✓		✓	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	LAB DATA INTERPRETATION urine,Blood chemistry	**DATA INTERPRETATION**	Students will be able to recall a) Causes of Dearranged labs b) Suggest differential diagnosis c)Components of URINE and Blood chemistry	Students will be able to a) Withdraw samples	Students will be able to a) Take consent for History and Clinical Examination and Sampling			✓		✓		✓	SGD WARD LAB	OSCE
	ACUTE FLACCID PARALYSIS	**CNS EXAMINATION**	Students must be able to Know the causes of AFP how to notify AFP Importance of notification Details of all diseases with AFP	Take relevent history and do examination	Able to take consent and do appropriate counselling			✓		✓		✓	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE

	CONGENITAL HEART DISEASE AND ACQUIRED HEART DISEASE	**CVS EXAMINATION**	Student will be able to a) Recall etiology b) Describe clinical features c) Suggest differential diagnosis d) Review basic management points in acquired and congenital heart disease	Student will be able to a) Take history and perform precordial examination b) Interpret CXR, ECG concerning the focal disease	Take consent for History and Clinical Examination b) Counsel and educate patient about disease, its diagnosis, treatment and manageme nt			➹		➹		➹	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	PROCEDURES **IV cannulation,NG tube** **Suction catheter**	**PROCEDURES**	Students will be able to recall Indication of procedures steps and complication	Students will be able to perform under supervision or observe Basic method of procedure and demonstration	tudents will be able to take Consent for procedure and explain its complications.			➹		➹		➹	SGD	OSCE
	CHRONIC LIVER DISEASE	**GIT EXAMINATION**	Students will be able to recall a) causes of chronic liver disease b) Suggest differential diagnosis c) Review basic management steps (CLD)	Students will be able to Take history and perform abdominal and relevant examination Interpret Ascitic tap and its interpretation	tudents will be able to a) Take consent for for History and Clinical amination b) Counsel and educate patient about disease, its diagnosis, treatment, management			➹		➹		➹	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE

	CNS EXAMINATION	**SHORT CASE EXAMINATION**	Student must know the steps of examination Know the steps like higher motor function, cranial nerves, motor system,sensory system, and gait examination etc The interpretation of the findings of examination	Must be able to perform the all steps of central nervous system examination in a patient	Can take consent Must be able to introduce him/her Can counsell the patient regarding examination			➶		➶		➶	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	CHRONIC DIARRHOEA	**GIT EXAMINATION**	Students will be able to recall a) Causes of chronic diarrhea b) Suggest differential diagnosis c) Review basic management steps chronic diarrhea	Students will be able to Take history and perform abdominal and relevant examination	Students will be able to a) Take consent for for History and Clinical Examination b) Counsel and educate patient about disease, its diagnosis, treatment, management			➶		➶		➶	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	PROCEDURES (Ascitic tap, Pleural tap, Exchange transfusion, Gastric lavage Lumbar puncture	**PROCEDURES**	Students will be able to recall Indication of procedures steps and complication	Students will be able to observe or perform under supervision Basic method of procedure and demonstrate it	tudents will be able to take Consent for procedure and explain its complications.			➶		➶		➶	SGD WARD	OSCE

	APPROACH TO A CHILD WITH JOINT PAINS (JIA, SLE)	**RHEUMOTOLOGY EXAMINATION**	Students will be able to recall a) Causes of joint pain b) Suggest differential diagnosis c) Indication of procedures	Students will be able to a) Take history and do locomotor Students will be examination b) Basic method of procedure and demonstrate it	Able to a) Take consent for History and Clinical Examination b) Consent for procedure and explain its complications.			✓		✓		✓	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	CLINICAL PICTURS (Measles, Chickenpox, ITP, Scabies, Meningococcemia, Diaper Rash, Oral Thrush)	**DATA INTERPRETATION**	**Student must know how to** Identify common diseases with pictures , common clinical features , diagnosis and management	**Student must be able to** Identify common diseases with pictures Can identify common clinical features and Mention regarding diagnosis and management				✓		✓		✓	PPT,SGD	OSCE
	DEVELOPMENTAL DELAY	**CNS EXAMINATION**	Student must be able to Know normal developmental assessment in Children How to calculate developmental age of child Differential of developmental delay	Able to perform steps of developmental assessment Able to calculate development age of child Take history and examination to make differential of Developmental delay	Able to take consent and do appropriate counselling			✓		✓		v	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE

	LAB DATA **Xray - Chest** **Xray -wrist** **CT -SCAN**	**DATA INTERPRETATION**	Student Know the indication of tests Procedure of the tests Complication of test Interpretation of results	Student must tell indication of tests , Procedure of the tests Complication of test Interpretation of results	Know how to counsell the parents regarding investigations			✓		✓		✓	SGD WARD LAB	OSCE
	POLYURIA IN CHILDREN (Diabetes Mellitus Diabetes Insipidius)	**ENDOCRINE EXAMINATION**	Student must know Definition of polyuria Causes of polyuria Details of common causes	Take history and examination of patient with polyuria Interpret finding and make differentials	Consent and can counsell the parents regarding disease and its complication and management			✓		✓		✓	SGD / BED SIDE SESSIONS	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	PROGRESSIVE DIFFICULTY IN WALKING **(Duchenne muscular dystrophy Spinal muscular atrophy)**	**NEUROMUSCULAR EXAMINATION**	Student must be able to Know the Causes of progressive walking difficulty Details of common causes , management and Complications And know how to take history and examination of patient with progressive walking difficulty Interpret finding and make differentials	Take history and examination of patient with progressive walking difficulty Interpret finding and make differentials	Take Consent and can counsell the parents regarding disease and its complication and management								SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE

	CNS (SHORT CASE	**CNS EXAMINATION**	Student must know the steps of examination Know the steps like higher motor function, cranial nerves, motor system,sensory system, and gait examination etc The interpretation of the findings of examination	Must be able to perform the all steps of central nervous system examination in a patient	Must be able to introduce him/her Can counsell the patient regarding examination			➹		➹		➹	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	SHORT STATURE	**ENDOCRINOLOGY**	Students will be able to recall a) Causes of short stature b) Steps to evaluate short stature c) Suggest management steps	Students will be able to Take history and Perform detailed examination of Short stature Learn how to plot Length/Height Practice treatment plan	Students will be able to a) Take consent for History and Clinical Examination b) Educate parents about importance of compliance and regular follow-ups.			➹		➹		➹	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	AFEBRILE SEIZURES (Epilepsy)	**CNS EXAMINATION**	Student must Know the causes of afebrile seizures Know the clinical features ,steps of history , Examination and management plan of epilepsy	Able to take relevant history and examination And interpret findings	Can take consent Must be able to introduce him/her Can counsell the patient regarding examination			➹		➹		➹	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE

	RESPIRATORY SYSTEM	**SHORT CASE EXAMINATION**	Know the steps of Respiratory system examination Like inspection, palpation, percussion and auscultation The interpretation of the findings of examination Especially finding of auscultation	Must be able to perform the all steps Respiratory examination in a patient	Can take consent Must be able to introduce him/her Can counsell the patient regarding examination			✓		✓		v	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	BLEEDING DISORDER **Hemophilia ITP**	**HEMATOLOGY EXAMINATION**	Students will be able to a) Recall physiology of hemostasis b) Describe clinical feature suggestive of an underlying bleeding disorder c) Suggest differential diagnosis d) Review basic management	Students will be able to a) Take history and perform joint examination for bleeding disorder b) Interpret lab findings in a child with bleeding disorder (platelet count, PT/APTT) c) Practice treatment of bleeding disorder dents will be able to	students will be able to a) Take consent for History and Clinical Examination b) Counsel and educate patient about disease, its diagnosis, treatment and management			✓		✓		✓	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	GIT EXAMINATION	**EXAMINATION**	Know the steps of Gastrointestinal system examination Like inspection, palpation, percussion and auscultation The interpretation of the findings of examination Especially finding liver and spleen palpation And fluid thrill and shifting dullness	Must be able to perform the all steps Gastrointestinal system examination in a patient	Can take consent Must be able to introduce him/her Can counsell the patient regarding examination			✓		✓		✓	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE

	PROGRESSIVE PALLOR	**GENERAL PHYSICAL EXAMINATION**	Student must be able to Know the causes of progressive pallor Know the steps of history taking and relevant examination according to differentials know the interpretation of finding	Must be able to perform the all steps General physical examination and relevant Examination like GIT examination in a patient	Can take consent Must be able to introduce him/her Can counsell the patient regarding examination			➶		➶		➶	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE
	CVS EXAMINATION	**SHORT CASE EXAMINATION**	Know the steps of cardiovascular system examination Like inspection, palpation, percussion and auscultation The interpretation of the findings of examination Especially finding of auscultation	Must be able to perform the all steps CVS examination in a patient	Can take consent Must be able to introduce him/her Can counsell the patient regarding examination			➶		➶		➶	SGD / BED SIDE SESSIONS (Grand Ward Rounds, Teaching Ward Rounds)	OSPE ,MINICEX ,CBD SHORT CASE LONG CASE

SECTION -VIII

LEARNING RESOURCES

REFERENCE BOOKS

Recommended resources:

1. Basics of Pediatrics by Pervez Akbar Khan- Revised 10th edition.
2. Nelson essentials of Pediatrics- 9th edition.
3. Nelson textbook of pediatrics-21st edition.
4. Pediatric board study guide- 2nd edition.
5. Gomella NEONATOLOGY-6th edition.
6. Textbook of neonatal resuscitation American academy of pediatrics-8th edition.
7. Bedside techniques, methods of clinical examination-5th edition.
8. Macleod’s clinical examination-14th edition.
9. Examination pediatrics by Wayne Harris.

Subjects	Learning Resources
CORE SUBJECT	
PEDIATRICS	**TEXTBOOK** 1. Basics of Pediatrics by Pervez Akbar Khan- Revised 10th edition. 2. Nelson Textbook of Pediatrics" by Robert M. Kliegman, Joseph St. Geme, and other 3. Nelson essentials of Pediatrics- 9th edition. 4. Nelson textbook of pediatrics-21st edition. 5. Pediatric board study guide- 2nd edition. 6. Gomella NEONATOLOGY-6th edition. 7. Textbook of neonatal resuscitation American academy of pediatrics-8th edition. 8. Bedside techniques, methods of clinical examination-5th edition. 9. Macleod's clinical examination-14th edition. 10. Examination pediatrics by Wayne Harris.

Subjects	Resources
VERTICAL Integration Subjects	
Anatomy	**1. Gross Anatomy** **2.** Gray's Anatomy by Prof. Susan Standring 42th edition, Elsevier. **3.** Clinical Anatomy for Medical Students by Richard S. Snell 10th edition. **4.** Clinically Oriented Anatomy by Keith Moore 9th edition. **5.** Cunningham's Manual of Practical Anatomy by G.J. Romanes, 16th edition, Vol-I, II and III https://teachmeanatomy.info/ **B. Histology** 1. B. Young J. W. Health Wheather's Functional Histology 6th edition. 2. Medical Histology by Prof. Laiq Hussain 7th edition. 3. https://www.udemy.com/course/**histology**/ **C. Embryology** 1. Keith L. Moore. The Developing Human 11th edition. 2. Langman's Medical Embryology 14th edition.

Physiology	**A. Textbooks** 1. Textbook Of Medical Physiology by Guyton And Hall 14th edition. 2. Ganong ‘ S Review of Medical Physiology 26th edition. **B. Reference Books** 1. Human Physiology by Lauralee Sherwood 10th edition. 2. Berne & Levy Physiology 7th edition. 3. Best & Taylor Physiological Basis of Medical Practice 13th edition. 4. Guyton & Hall Physiological Review 3rd edition.
Biochemistry	**Textbooks** 1. Lippincott IIIustrated Reviews: Biochemistry – Wolters Kluwer 2. Harper’s Illustrated Biochemistry 32th edition. 3. Lehninger Principle of Biochemistry 8th edition. 4. Biochemistry by Devlin 7th edition.
Community Medicine	**Textbooks** 1. Community Medicine by Parikh 25th edition. 2. Community Medicine by M Illyas 8th edition. 3. Basic Statistics for the Health Sciences by Jan W Kuzma 5th edition.

Pathology/Microbiology	**Textbooks** 1. Robbins & Cotran, Pathologic Basis of Disease, 10th edition. 2. Rapid Review Pathology, 5th edition by Edward F. Goljan MD. 3. http://library.med.utah.edu/WebPath/webpath.html
Pharmacology	**Textbooks** 1. Lippincot Illustrated Pharmacology 9th edition.
Spiral Integration Subjects & General Education Cluster Courses	
Bioethics	**Textbooks** 1. Textbook of Medical Ethics by Erich H. Loewy (Author)
Videography	The Five Cs of Cinematography by Joseph V. Mascelli Digital Video Production: A Comprehensive Guide by Anirban Das
Leadership	Leadership and the New Science by Margaret J. Wheatley A Treatise on Good Works by Martin Luther
Family Medicine	**Textbooks** 1. Textbook of Family Medicine" by Robert E. Rakel and David P. Rakel 2. Essentials of Family Medicine" by Philip D. Sloane, Lisa M. Slatt, and others 3. Textbook of Family Medicine" by Ian R. McWhinney 4. Family Medicine: Principles and Practice" by Robert B. Taylor
Islamiat & Pak Studies	Islamiyat Lazmi by Muhammad Khalil
HORIZONTAL Integration Subjects	
Medicine	**Textbooks** 1. Harrison's Principles of Internal Medicine by J. Larry Jameson, Anthony S. Fauci, and others 2. Davidson's Principles and Practice of Medicine by Stuart H. Ralston, Ian D. Penman, and others 3. Kumar and Clark's Clinical Medicine by Parveen Kumar and Michael Clark 4. Oxford Handbook of Clinical Medicine by Ian B. Wilkinson, Tim Raine, and others

Surgery	**Textbooks** 1. Bailey & Love's Short Practice of Surgery by Norman S. Williams, P. Ronan O'Connell, and Andrew W. McCaskie
Obstetrics & Gynecology	**Textbooks** 1. Obstetrics by Ten Teachers 2. Gynaecology by Ten Teachers

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Digital Resources

Digital Resources	
Up To Date	https://www.uptodate.com/contents/search
RMU Digital library	http://www.digitallibrary.edu.pk/rmc.html
International Resources	
USMLE	https://www.usmle.org/
Plab	https://www.gmc-uk.org/registration-and-licensing/join-the-register/plab
U World	https://www.uworld.com/
Kaplan	https://mykaplan.co.uk/

SECTION -IX

Assessment

Assessment

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 medica

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.

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 assessment

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 assessme

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:

a .Written assessment (50%) Multiple Choice Questions (MCQs) Short answer questions (SAQs)

b .Performance (Practical) assessment (50%)

Objective Structured Clinical Examination (OSCE) , Shortcases will be included in OSCE

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.

Weekly LMS (learning management system) assessment of LGIS

- There will be weekly assessment of LGIS 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.

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

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.

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.

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.

Passing criteria in annual professional examination

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

Total break up of assessment score

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

Table of Specification of Assessment
Final year MBBS 2024

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 Table of Specification

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

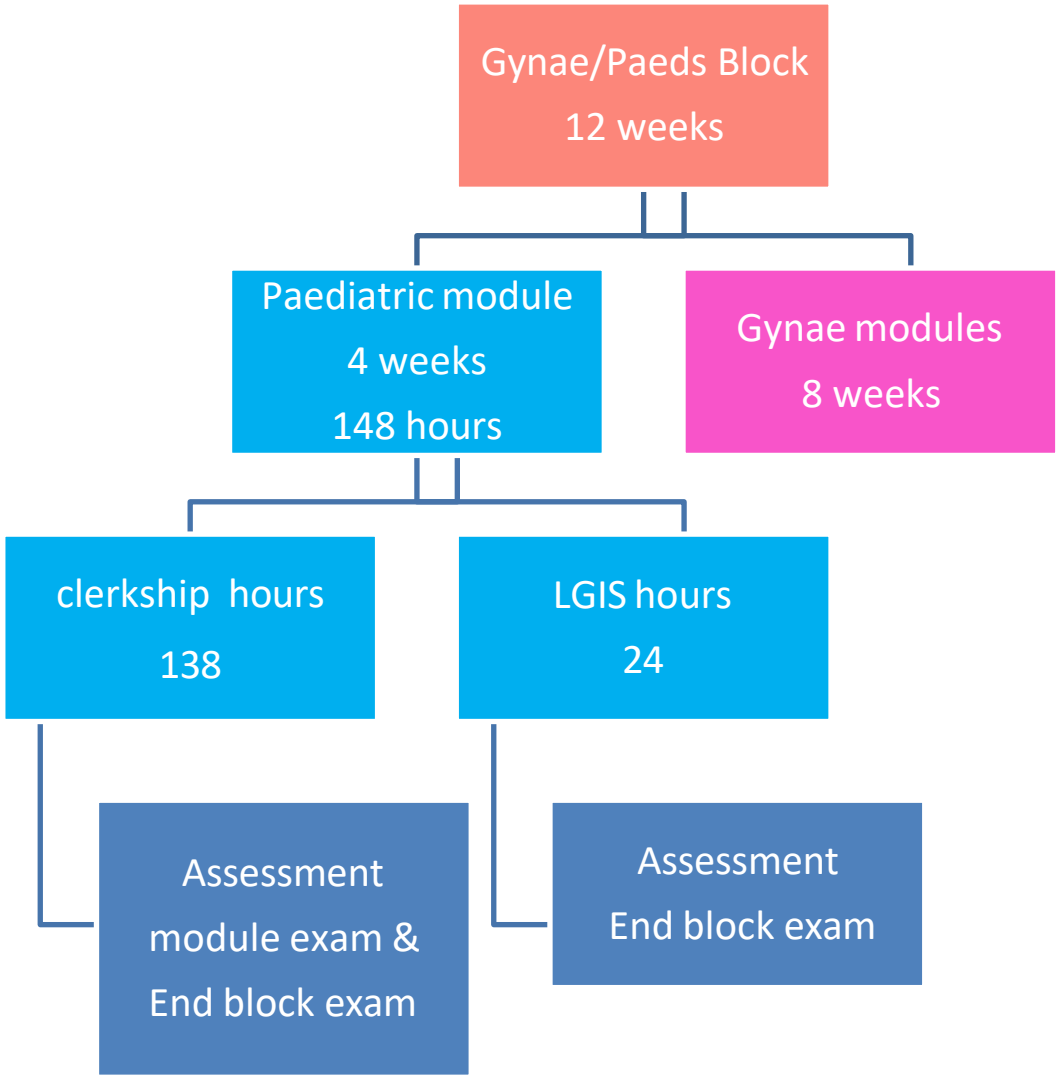
Content Domains or Areas: The assessment's broad categories or content domains are described in this section. These domains have to match the course or module's curriculum and learning objectives.

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.

GYNAE/PAEDS BLOCK 12 WEEKS



Module & End-Block Assessment strategies:

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.

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.

EMQs: EMQs are designed to assess a candidate's clinical reasoning and decision-making skills by presenting a series of patient scenarios or clinical vignettes along with a list of options.

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.

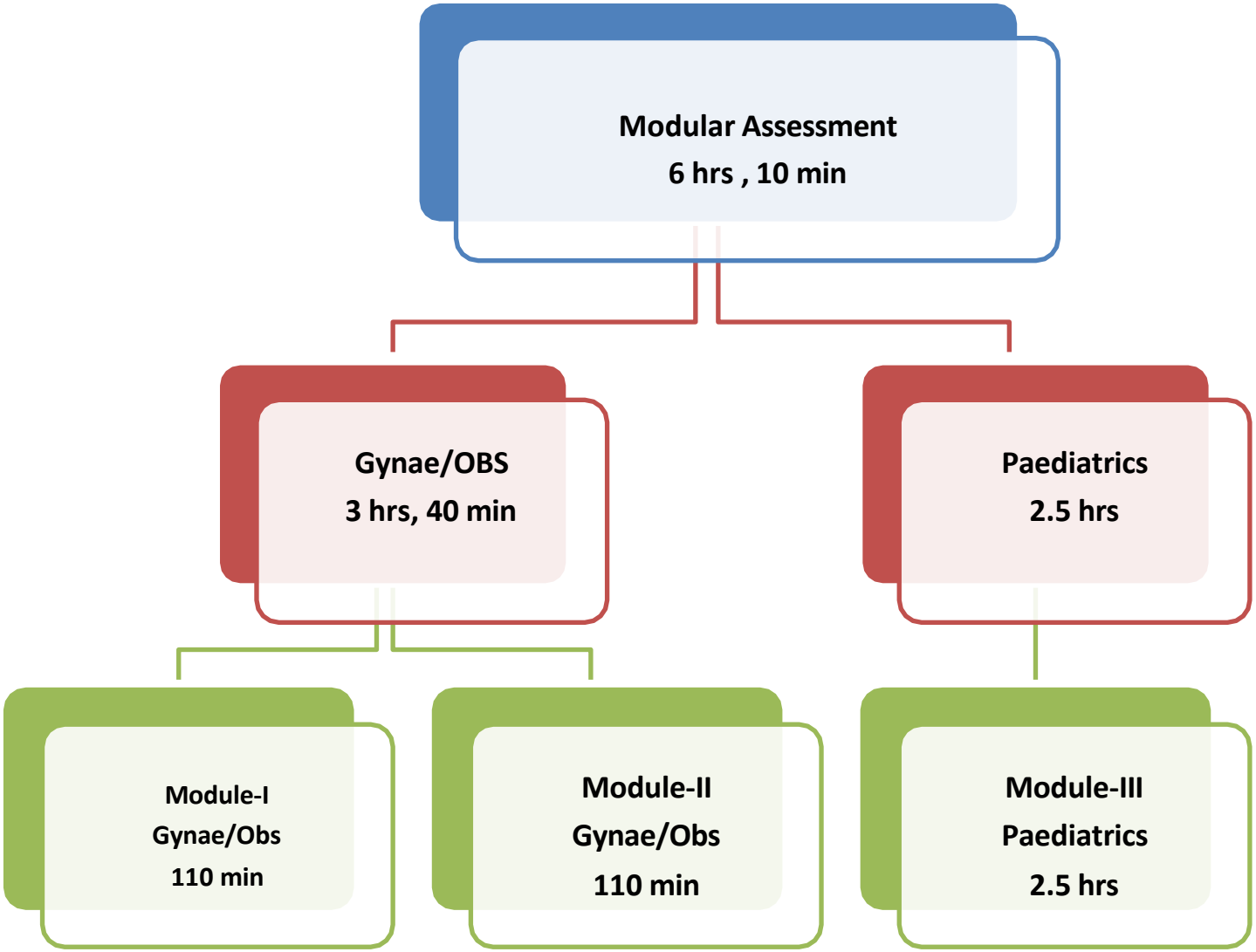
SEQs: Short essay questions serve as an effective tool for assessing students' comprehension, critical thinking, and communication skills. They encourage active engagement with course material, promote deeper understanding, and provide instructors with valuable insights into students' learning processes. As such, SEQs remain a cornerstone of assessment in educational institutions worldwide.

Audio-Visual assisted OSCE:

An audio-visual assisted OSPE (Objective Structured clinical Examination) refers to a method of assessment commonly used in medical education and other fields where practical skills are essential. Students are shown certain videos or visuals after which they have to answer the given questions.

Ci OSCE: Clinically integrated Objectively structured clinical examination

An objectively structured clinical examination (OSCE) is a type of assessment method used to evaluate clinical skills and competencies in a structured and standardized manner. In an OSCE, candidates move through a series of stations or tasks, each designed to assess specific practical skills or competencies


Modular Assessment
6 hrs , 10 min
Gynae/OBS
3 hrs, 40 min
Paediatrics
2.5 hrs
Module-I
Gynae/Obs
110 min
Module-II
Gynae/Obs
110 min
Module-III
Paediatrics
2.5 hrs

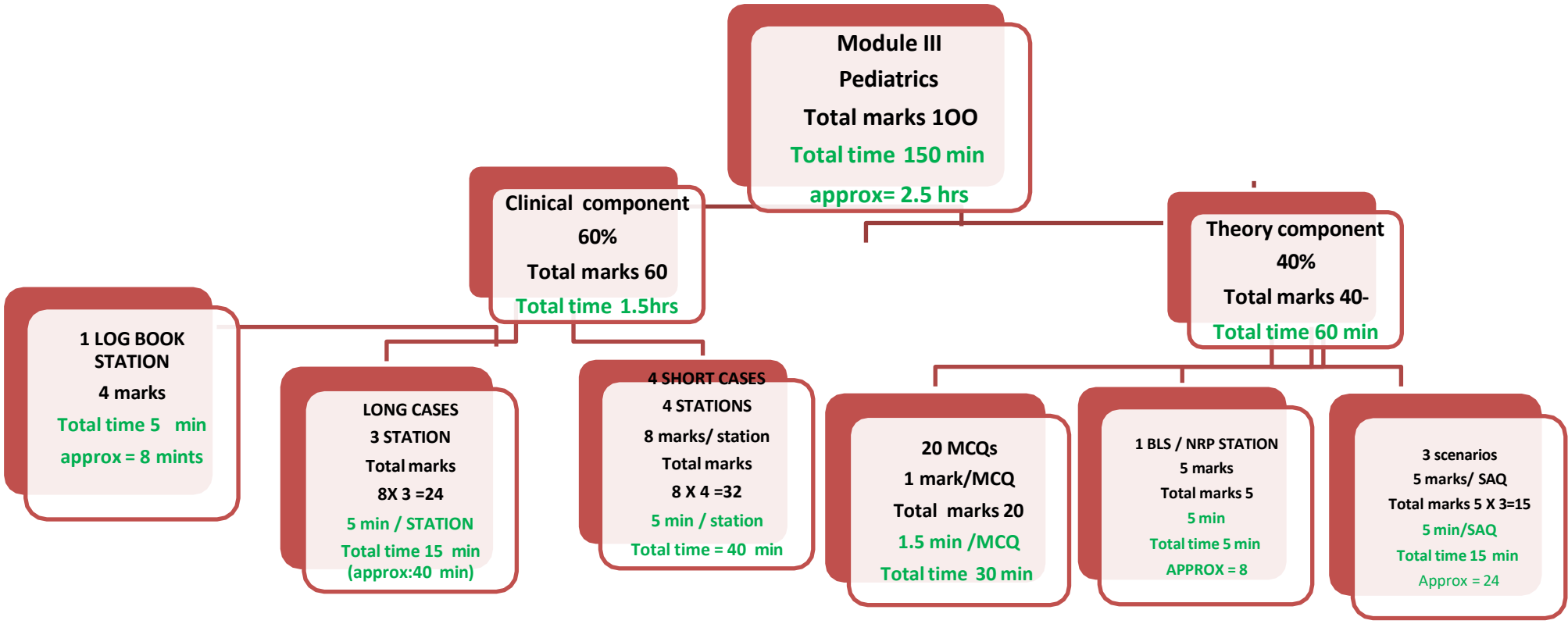

Module III
Pediatrics
Total marks 1OO
Total time 150 min
approx= 2.5 hrs
Clinical component
60%
Total marks 60
Total time 1.5hrs
Theory component
40%
Total marks 40-
Total time 60 min
1 LOG BOOK STATION
4 marks
Total time 5 min
approx = 8 mints
LONG CASES
3 STATION
Total marks
8X 3 =24
5 min / STATION
Total time 15 min
(approx:40 min)
4 SHORT CASES
4 STATIONS
8 marks/ station
Total marks
8 X 4 =32
5 min / station
Total time = 40 min
20 MCQs
1 mark/MCQ
Total marks 20
1.5 min /MCQ
Total time 30 min
1 BLS / NRP STATION
5 marks
Total marks 5
5 min
Total time 5 min
APPROX = 8
3 scenarios
5 marks/ SAQ
Total marks 5 X 3=15
5 min/SAQ
Total time 15 min
Approx = 24

Table of specification
Module examination

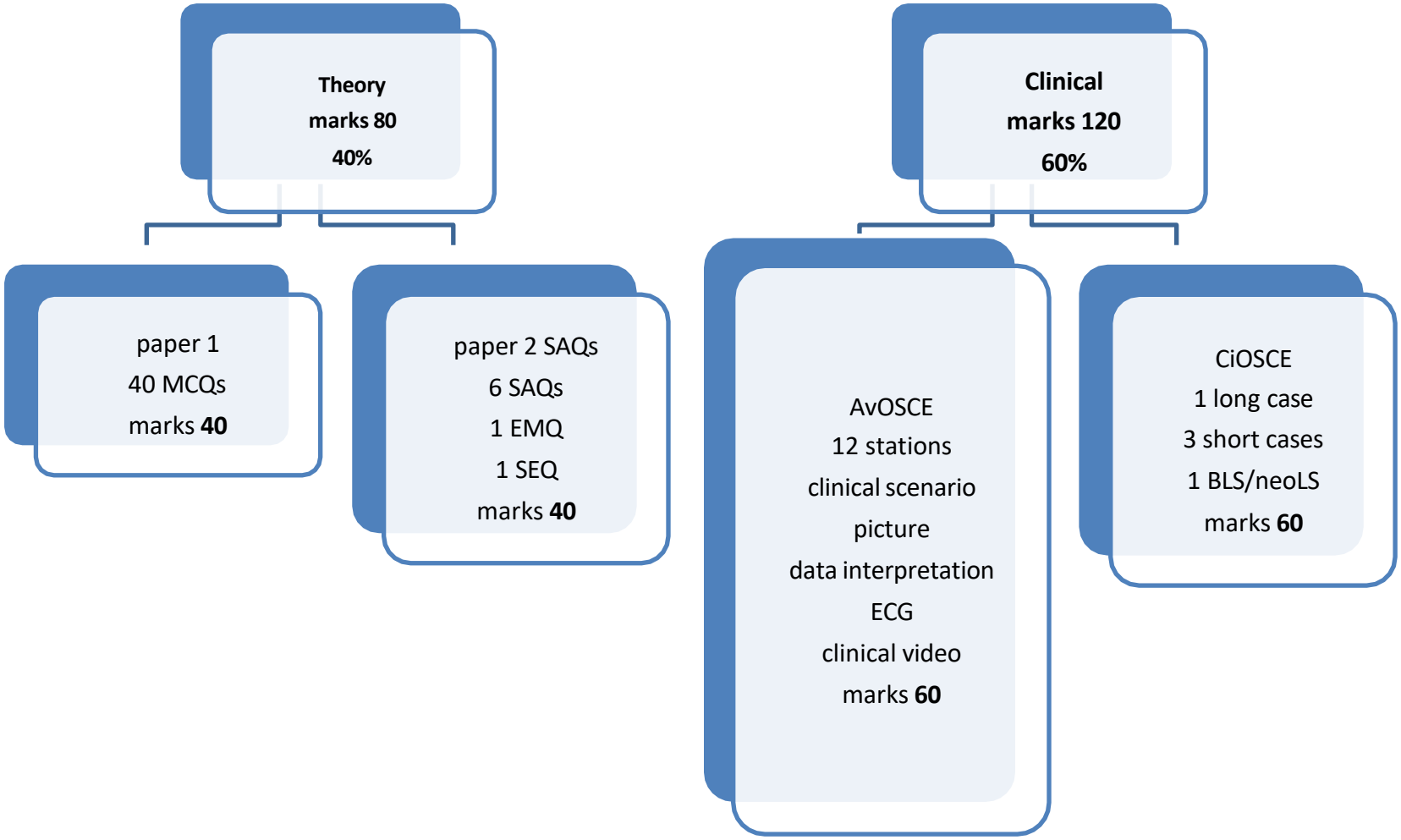
No.	Stations	Marks
1	Long Case – History Taking	8
2	Long Case – Examination	8
3	Long Case – Viva Voce	8
4	Short Case–GIT	8
5	Short Case – Respiratory	8
6	Short Case– CVS, CNS	8
7	Short Case– GPE	8
8	Work Book, Log Book	4
9	ECG/Instrument/ Lab Data/ Procedure	5
10	X-Ray or CT Scan	5
11	Picture/ Clinical Scenario	5
12	BLS/Neonatal Resuscitation	5
13	MCQs (clinical based scenarios)	20

	TOTAL MARKS	**100**

Table of specification (MCQS)
Module exam Paeds

S. No.	**Domain of Assessment**	**Question No.**	**Integration**			**Cognition**	**Weightage**		
			CK	**HI/VI**	**SI**		**CK**	**HI/VI**	**SI**
1	Neonatology Respiratory diseases	1,2,3	5			C2	25%		
		4,5				C3			
2	Infectious Diseases	6,7,8	5			C2	25%		
		9,10				C3			
3	Gastroenterology	11,12,13	4	1		C2	20%	5%	
		14,15				C3			
4	Neurodevelopmental Paediatrics	16,17		2		C3		10%	
5	Renal System	18		1		C2		5%	
6	Cardiovascular	19			1	C2			5%
7	Endocrinology Genetics	20			1	C2			5%
TOTAL							70%	20%	10%

Revised TOS End block examination (EBE)


Theory
marks 80
40%
paper 1
40 MCQs
marks 40
paper 2 SAQs
6 SAQs
1 EMQ
1 SEQ
marks 40
Clinical
marks 120
60%
AvOSCE
12 stations
clinical scenario
picture
data interpretation
ECG
clinical video
marks 60
CiOSCE
1 long case
3 short cases
1 BLS/neoLS
marks 60

Revised TOS End block examination (EBE)

Component	Details	Marks
Theory Papers	Paper 1 MCQs - 40 Multiple Choice Questions (MCQs) per paper Paper 2 SAQs 6 Short Essay Questions (SEQs) per paper 1 SEQs 1 EMQ	40 (20%) 40 (20%) Total: 80 marks (40%) Time Allocated: 120 min
Objective Structured Clinical Examination (CiOSCE)	**Long Case** - 1 Long Case - Duration: 60 minutes **Short Cases** - 3 Short Cases - Duration: 15 minutes each **BLS / NNR:** 15 Minutes	**24 (12%)** **24 (12%)** **12 (6%)** **Total: 60 marks (30%)** **Time allocated: 120 min**
Audio-Visual Objective Structured Clinical Examination (AvOSCE)	- 12 slides presented - 5 minutes per slide - Each slide assesses clinical reasoning and decision-making	5 stems/ marks per slide **Total: 60 marks (30%)** **Time allocated: 60 min**
Assessment Criteria	- All sections must be completed to pass - Marks based on accuracy, clinical reasoning, and professional standards - Minimum passing grade required for each section	**<80% attendance initially marks will be deducted to Half and later on they are not allowed to sit in block exam.** **Clinical 120 marks (60%)** **Theory 80 marks (40%)** **Total marks 200** **Time: 300 minutes** **(5 hours)**

TOS for AvOSPE

Stations (5 stems and 5 marks each)	Total 12 stations Total Marks 60
Clinical scenario (counselling/ethics)	1
Picture CT scan, X-ray, clinical picture Genetics, syndrome, procedure	6
ECG	1
Data interpretation	1
Videos Clinical signs	2
Video BLS/neoLS	1

Revised Table of specification

(Pre-Annual examination)

Revised TOS Pre-Annual assessment

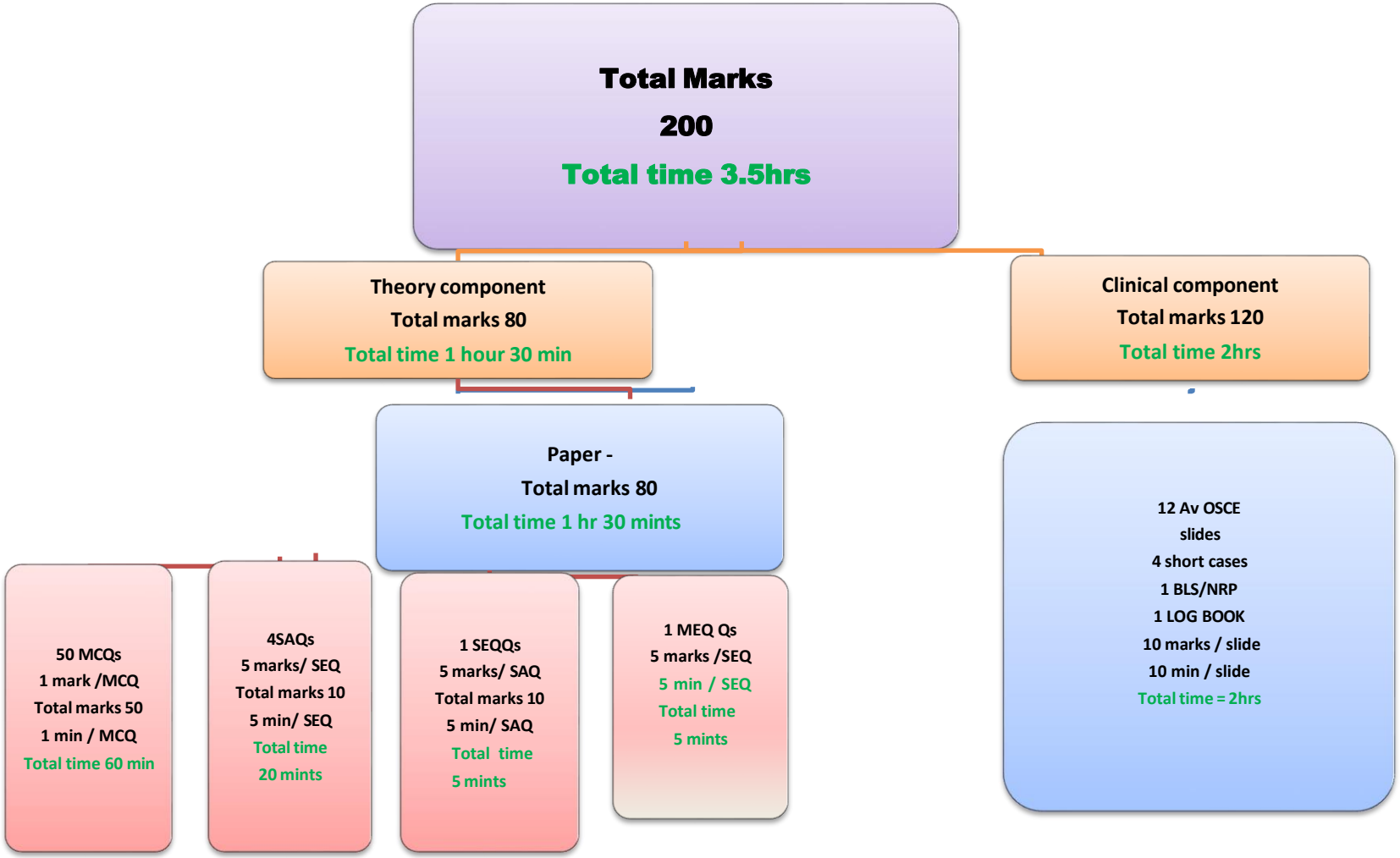


Table of Specification

Pre-Annual Assessment

Component		Marks
Theory 40%	50 MCQs	50
	4 SAQs	20
	1 EMQ	5
	1 SEQ	5
Clinical 60%	12 Av-OSCE	60
	4 Short cases	40
	1 BLS	10
	Log book	10
Total marks		200

TOS for Pre-Annual Assessment
Theory

	Topic Distribution	MCQs-50	SAQs/ EMQ/ SEQ -6
1	Neonatology	4	1
2	Infectious Diseases	4	1
3	Gastroenterology	4	1
4	Cardiology	4	1
5	Nephrology	4	1
6	Neurology	4	1
7	Pediatric Emergency/ Critical Care	4	
8	Hematology/ Oncology	4	
9	Preventive Pediatrics/ Nutrition	4	
10	Immunology/ Rheumatology/ Bone Disease	2	
11	Endocrinology	4	
12	Pulmonology	4	
13	Developmental/ Genetics/ Metabolic	2	
14	Dermatology/ Psychiatry	2	

TOS for Clinical Pre-Annual Assessment

Assessment	Number of stations	Topics
Av-OSCE	12	Picture, pedigree, X-ray, ECG, data interpretation, clinical scenario
Short cases	04	GPE, respiratory, CVS, GIT, CNS
BLS/NRP	01	Pediatric basic life support
Log book	01	Log book record of pediatric clerkship

Table of specification
Final Professional MBBS Examination

Subject	THEORY			CLINICALS			
	Component	**No of Items**	**Marks**	**Component**	**No of Items stations**	**Marks**	**Total marks**
PEDIATRIC **Total marks with CIA** **Annual Exam** **(Theory + Clinical)** **70 + 70** **140 marks** **+** **CIA** **60 marks**	**Paper I** MCQ **Paper II** SEQ	35 7	35 (1 x 35) 35 (5 x 7)	OSCE Long case Short case BLS Loogbook Av-OSPE	 03 04 01 01 3	 21(3x7) 28 (4x7) 05 04 12(3x4)	**140 (70 %)**
Total Annual +CIA **140+60** **200**			**70**			**70**	
	Continuous Internal Assessment (30%)		**30**	Continuous Internal Assessment (30%)		**30**	**60 (30%)**
	Total Marks		**100 (50%)**	**Total Marks**		**100 (50%)**	**200**

	Component		Marks	Total marks
Theory	Paper 1	35 MCQs	35	70
	Paper 2	7 SAQs	35	
Clinical	OSCE	1 Long case (3 stations)	21	70
		4 Short cases	28	
		1 BLS	05	
		Log book	04	
	Av-OSPE	Av-OSCE	12	
Internal assessment 30 %		End block exam	12.5	60
		Work based assessment & Module exam assessment	44.5	
		CPC	3	
Total marks				**200**

Table of specification MCQ (CALGARY METHOD)

	Topic Distribution	IMPACT	FREQUENCY	I X F	WEIGHTAGE IXF / 73	TOTAL MCQ 35 NO.	marks
1	**Neonatology**	3	3	9	0.12	4.2	**4**
2	**Infectious Diseases**	3	3	9	0.12	4.2	**4**
3	**Gastroenterology**	3	3	9	0.12	4.2	**4**
4	**Pulmonology**	3	3	9	0.12	4.2	**4**
5	**Nephrology**	3	2	6	0.08	2.8	**3**
6	**Neurology**	3	2	6	0.08	2.8	**3**
7	**Cardiology**	3	2	6	0.08	2.8	**3**
8	**Pediatric Emergency/ Critical Care**	3	2	6	0.08	2.8	**3**
9	**Hematology/ Oncology**	2	2	4	0.05	1.75	**2**
10	**Preventive Pediatrics/ Nutrition**	1	2	2	0.027	0.945	**1**
11	**Immunology/ Rheumatology/ Bone Disease**	1	1	1	0.013	0.45	**1**
12	**Endocrinology**	2	2	4	0.05	1.75	**1**
13	**Developmental/ Genetics/ Metabolic**	1	.1	1	0.013	0.45	**1**
14	**Dermatology/ Psychiatry**	1	1	1	0.013	0.45	**1**
	TOTAL			73			**35**

Table of specification Final professional Theory paper SEQ (CALGARY METHOD)

	Topic Distribution	IMPACT	FREQUENCY	I X F	WEIGHTAGE IXF / 54	No. of MCQs	**Rounded no of SEQS**	**MARKS**
1	**Neonatology**	3	3	9	0.16	0.96	**1**	**5**
2	**Infectious Diseases**	3	3	9	0.16	0.96	**1**	**5**
3	**Gastroenterology**	3	3	9	0.16	0.96	**1**	**5**
4	**Pulmonology**	3	3	9	0.16	0.96	**1**	**5**
5	**Nephrology**	3	2	6	0.11	0.66	**1**	**5**
6	**Neurology**	3	2	6	0.11	0.66	**1**	**5**
7	**Cardiology**	3	2	6	0.11	0.66	**1**	**5**
	TOTAL			54			**6**	**35**

TABLE OF SPECIFICATION FOR CLINICAL COMPONENT

No.	Component	Station	Marks
1	**OSCE**	Long Case – History Taking	7
2		Long Case – Examination	7
3		Long Case – Viva Voce	7
4		Short Case–GIT	7
5		Short Case – Respiratory	7
6		Short Case– CVS, CNS	7
7		Short Case– GPE	7
8		Work Book, Log Book	4
9		BLS/Neonatal Resuscitation	5
Marks			**58**
10	**Av-OSPE**	Av-OSPE (ECG/Instrument/ Lab Data/ Procedure)	4
11		Av-OSPE (X-Ray or CT Scan)	4
12		Av-OSPE (Picture/ Clinical Scenario)	4
Marks			**12**
Total Marks			**70**

Clinical Exam Cycle (OSCE)

<table>
<tr><td>1
Long Case- History taking</td><td>2
Long Case- Examination</td><td>3
Long Case- Viva</td></tr>
<tr><td>9
BLS/Neonatal Resuscitation/
Pediatric Life Support</td><td rowspan="3">OSCE
Final Year MBBS

5 minutes/station
50 minutes' minimum cycle, can be increased with Rest Stations
Total Marks 58

Station 1-7= 7numbers each
Station 8 = 4 marks
Station 9= 5 numbers each
(7 x 7) +4 +5)
58</td><td>4
Short Case- GIT</td></tr>
<tr><td>8
Log Book, Work Book</td><td>5
Short Case- Respiratory</td></tr>
<tr><td>7
Short Case- GPE</td><td>6
Short Case-
CVS/CNS</td></tr>
<tr><td></td><td></td><td></td></tr>
</table>

Clinical Exam Cycle (Av-OSPE)

<table>
<tr><td></td><td>Av-OSCE
Final Year MBBS</td><td></td></tr>
<tr><td>Station 10
Av-OSPE
ECG/Instrument/ Lab Data/ Procedure</td><td>5 minutes/station
20 minutes' minimum cycle, can be increased with Rest Stations

Station 10-12 = 4 numbers each (3 x 4)
Total marks = 12</td><td>Station 11
Av-OSPE
X-Ray or CT Scan</td></tr>
<tr><td colspan="3">Station 12
Av-OSPE
Picture/ Clinical Station</td></tr>
</table>

Internal Assessment

(Table of Specification)

Distribution	Marks	Total
Clerkship-Paediatric Unit (BBH or HFH) Wise Assessment 74.17% (44.5 Marks) **A. Work place based (WBA)-29.15%** i. Case Presentation (16.66%) ii. Workbook (5.83%) iii.Evening Attendance (6.66%) **B. Module exam 45%**	**17.5** **10** **3.5** **4** **27**	**44.5**
END Block Exam (20.83%)	**12.5**	**12.5**
CPC 5% Attended ≥ 75% 3 marks Attended ≤ 75% Zero Mark	**3**	**3**
Total		**60**
Unit/ward assessment will be rounded		

- There is no compensation for attendance for missed period(s) of clerkship. Remedial learning can only be used to make up for compensation of clerkship objectives not attendanc

Internal Assessment- 60 Marks
% Wise Breakup

Component	Marks	% of internal assessment
End Block Exam (EBE)	**12.5/60**	**20.83%**
Clerkship – unit/ward assessment-work place based (WBA) and Module exam assessment	**44.5/60**	**74.17%**
CPC	**3/60**	**5%**
Total	**60**	**100%**

Important Note: Once internal assessment is compiled it CANNOT be altered under ANY circumstance unless a clerical/ human error is detected. He will repeat classes and skillsThere will be no change in calculated internal assessment scores for Supplementary University examination.

Work based assessment (WBA) and Module exam

Work Place Based Assessment 17.5 Marks (29.15%)			Module exam 27 Marks (45%)
Case presentation	**Clinical work book assessment (5 case write Ups on work book)**	**4 evening duties in ward/ER per month**	**Module exam 27 marks (45%)**
1 Long Cases **16.66%** **10 marks**	**5.83%** **3.5 marks)** **5 complete case write Ups)** **Yes 3.5 marks** **No <5-zero**	**6.66% (4 marks)** **8/8 Evening marks 4** **6/8 Evening marks 3** **4/8 Evening marks 2** **2/8 Evening marks 1**	**OSCE (3 scenario, data interpretation, instruments, picture, Xray etc stations)** **MCQs (clinical scenario based)** **1 BLS / NRP station,** **1 log book station,** **4 Short Cases** **1 Long Case (History taking, examination and viva)** **OSCE station marks 4x5 and 1x4 =24** **MCQs (clinical scenario based=20** **Short cases marks 4x8=32** **Long Case 3x8= 24** **Total Module exam Marks 100** **Obtained marks / total marks (100) x 27** **For Example Student A took 70/100** **His ward test assessment according to the given formula will be** **70/100x27= 18.9 out of 27**

SUMMARY OF ASSESSMENTS

NAME	FREQUECY	Pattern	Marks	TYPE	SETTING
CPC Quiz	**After every CPC**	10 MCQs		Formative	On line
LMS tests	**Every 1 weeks**	20 MCQs		Formative	On line
Module III	**At end of module**	**Total marks** Theory (MCQs) (clinical based scenarios) OSCE BLS/Neonatal Resuscitation Clinicals Long Case Short Case Log Book	**100** marks 40 60	Formative	Recpective units
End block exam	**At end of Block (12 weeks)**	**Total marks** **Theory Papers** Paper 1 MCQs 40 Multiple Choice Questions (MCQs) per paper Paper 2 SAQs 6 Short Essay Questions (SEQs) per paper 1 SEQs 1 EMQ **Objective Structured Clinical Examination (CiOSCE)** Long Case - 1 Long Case Short Cases - 3 Short Cases BLS / NRP **(AvOSCE) 12 slides**	**200** **80** **60** **60** marks	**Summative**	On Campus In respective units

Pre-Annual Examination	**At the end of year**	**TOTAL MARKS**	**200**	As an eligibility criteria for final professional exam	On Campus
		THEORY (40%)	**80**		
		50 MCQs: 50 **4 SAQs: 20** **1 EMQ 5** **1 SEQ 5**			
		CLINICALS (60%)	**120**		
		12 Av-OSCE 60 **4 Short cases 40** **1 BLS 10** **Log book 10**			
Profession-al exam	**At the end of year**	**Total marks**	**200**	Summative	Written-On Campus Clinical-in respective units
		Internal Assessment **(30% of total marks)**	**60**		
		Theory **(35% of total marks**	**70**		
		MCQs 35 **SAQs 35**			

		Clinical & Practical (40 % of total)	**70**		
		Long Case **Short Cases** **Logbook/BLS** **AV-OSCE stations**	21 28 9 12		

SECTION - X

Quality Assurance & Quality Enhancement

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

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 Equality Duties. This commitment encompasses promoting equality and diversity for everyone, regardless of any protected characteristic, working pattern, family circumstance, socio-economic background, 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's programmes 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:

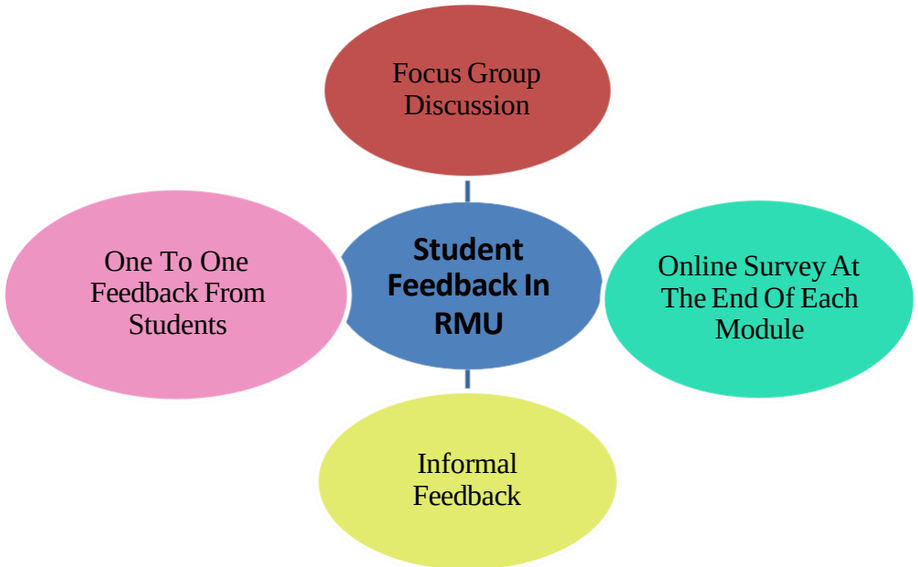
- ## Central survey campaign

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 the students and help to improve the teaching, learning and assessment methodologies.

- ## Focus Group Discussion

- **One To One Feedback from Students**



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 the library.					
Digital / Web Based resources were available.					
Power points of lectures were available					

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

Student Contribution

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

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 of Specifications.					
OSPE Exam was as per Table of Specification					
Table of Specification was shared					

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

LMS and its working

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.

- We plan on taking the curriculum to excellence and improving the ladder of curriculum according to Harden's ladder of curriculum

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.
10. 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.

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