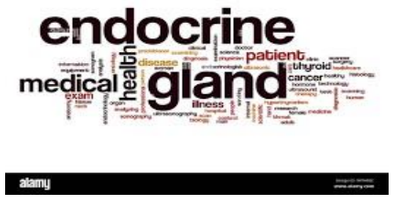




# Study guide

## Integrated Modular Curriculum

## 4th year MBBS

## Endocrinology Module - III


# Table of Contents

# 1- Endocrinology Module Team

| | Module committee | | | Module task force team | |
|---|---|---|---|---|---|
| 1. | Vice Chancellor RMU | Prof. Dr. Muhammad Umar | 1. | Coordinator | Dr. Sana Bilal<br>Dr. Imrana Saeed |
| 2. | Director DME | Prof. Dr. Rai Muhammad Asghar | 2. | DME focal person | Dr Maryum Batool |
| 3. | Convener Curriculum | Prof. Dr. Naeem Akhter | | | |
| 4. | Dean Basic Sciences | Prof. Dr. Ayesha Yousaf | | | |
| 5. | Additional Director DME | Prof. Dr. Ifra Saeed | | | |
| 6. | Associate Dean | Dr Asma Khan | | | |
| 7. | Chairperson Community Medicine | Prof. Dr. Arshad Sabir | | DME Implementation Team | |
| 8. | Focal Person Pharmacology | Dr.Zunera Hakim | 1. | Director DME | Prof. Dr. Rai Muhammad Asghar |
| 9. | Focal Person Community Medicine | Dr. Sana Bilal | 2. | Add. Director DME | Dr Asma Khan |
| 10. | Focal person Pathology | Dr. Syeda Ayesha | 3. | Assistant Director DME/ | Dr Omaima Asif |
| | | | 4. | Module planner & Implementation coordinator | Dr. Omaima Asif |
| | | | 5. | Editor | Dr. Omaima Asif |

# Module Preparation team

Professor Syed Arshad Sabir

HOD Community Medicine Department

Dr. Sana Bilal Associate professor

Coordinator

Dr Imrana Saeed

Co-Coordinator IMC

# 2-University Motto, Vision, Values & Goals

## 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.

## Vision and Values

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

## Goals of the Undergraduate Integrated Modular Curriculum

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

i. Provide thorough grounding in the basic theoretical concepts underpinning the practice of medicine.

ii. Develop and polish the skills required for providing medical services at all levels of the Health care delivery system in future life.

iii. Kindle a spirit of inquiry and acquisition of knowledge to help you attain personal and professional growth & excellence.

# Introduction to Endocrinology Module

## Introduction:

Endocrinology module provides integration of core concepts that underlie the foundation of basic sciences and their use in clinical medicine. This will eventually lead to developing critical thinking for integration and application of basic knowledge for clinical application.

## Rationale:

System based learning structure is adopted. The Endocrinology module is designed to impart basic knowledge. This knowledge will serve as a base on which the student will construct further knowledge about the etiology, pathogenesis, prevention of diseases and the principles of their therapeutics and management.

## Module outcomes:

## Knowledge

Each student will be able to acquire knowledge about the basic concepts of diseases in the community, use technology based medical education and to appreciate concepts & importance of

- Research
- Biomedical ethics
- Family medicine
- Artificial Intelligence

## Skills

Interpret and analyze various practical & practices of clinical sciences.

## Attitude

Demonstrate a professional attitude. Team building spirit and good communication skills.

This module will run in 4 weeks. The content covered will be made visible through introductory titles of the teaching sessions. Instructional strategies are given in the timetable and learning objectives are briefed in study guides. Study guides will also be available on university websites.

# 3-Terms & Abbreviations

## Contents



## Tables and figures

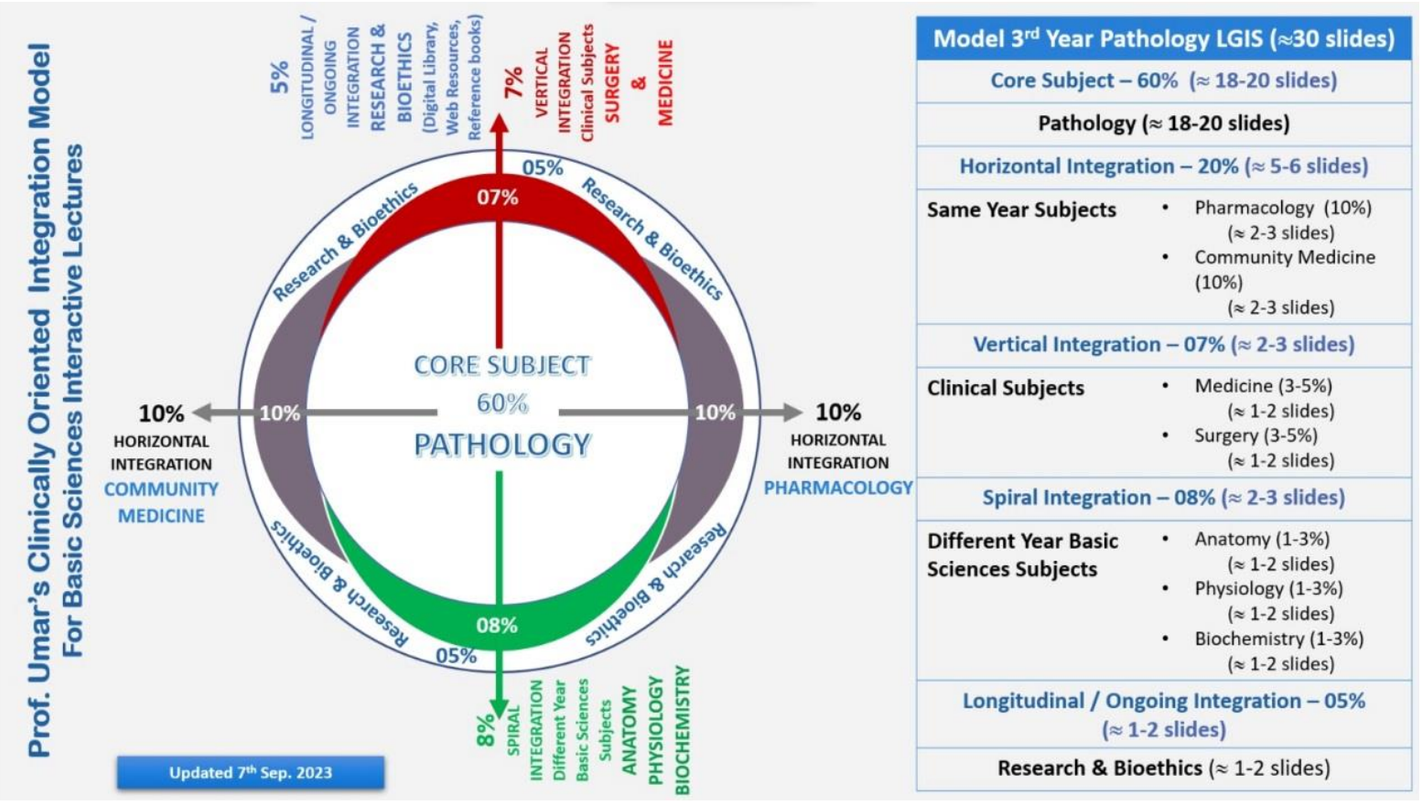
# 4- Domains Of Learning According To Blooms Taxonomy

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

# 5-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 be followed for delivery of all LGIS. 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.




| Model 3rd Year Pathology LGIS (≈30 slides) | |
|---|---|
| **Core Subject – 60% (≈ 18-20 slides)** | |
| **Pathology (≈ 18-20 slides)** | |
| **Horizontal Integration – 20% (≈ 5-6 slides)** | |
| **Same Year Subjects** | • Pharmacology (10%) (≈ 2-3 slides)<br>• Community Medicine (10%) (≈ 2-3 slides) |
| **Vertical Integration – 07% (≈ 2-3 slides)** | |
| **Clinical Subjects** | • Medicine (3-5%) (≈ 1-2 slides)<br>• Surgery (3-5%) (≈ 1-2 slides) |
| **Spiral Integration – 08% (≈ 2-3 slides)** | |
| **Different Year Basic Sciences Subjects** | • Anatomy (1-3%) (≈ 1-2 slides)<br>• Physiology (1-3%) (≈ 1-2 slides)<br>• Biochemistry (1-3%) (≈ 1-2 slides) |
| **Longitudinal / Ongoing Integration – 05% (≈ 1-2 slides)** | |
| **Research & Bioethics** (≈ 1-2 slides) | |

Table 1: Prof Umar's Model of LGIS

# 6-Small Group Discussion (SGD)

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

## Standardization of teaching content in SGD`s

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

## 7-Self Directed Learning (SDL)

- Self- directed learning is a process where students take primary charge of planning, continuing, and evaluating their learning experiences.
- Home based / time assignment.
- Learning objectives are briefed in study guide
- Learning resources including pages, book names etc or link / web site
- Assessment: it will be online on LMS on a predefined schedule

## Case Based Learning (CBL)

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

## 8-Learning Objectives, Teaching Strategies & Assessments

Learning objectives are given to the students and will be based on:

- Purpose to provide students with a relevant opportunity to see theory in practice • Require students to analyze data in order to reach a conclusion.
- Develop analytic, communicative and collaborative skills along with content

# Contents of the Module

1. Horizontally Integrated Basic Sciences (Physiology, Pharmacology, Pathology, Community Medicine) 2. Large Group Interactive Session (LGIS):

i. Pathology
ii. Community Medicine
iii. Pharmacology
iv. Medicine
v. Surgery
vi. Gynae & Obs vii. pediatrics

3. Small Group Discussions (SGD)

i. Pathology
ii. Community Medicine
iii. Pharmacology

4. Self-Directed Topic, Learning Objectives & References (SDL)

i. Pathology
ii. Community Medicine
iii. Pharmacology

5. PAL

Community medicine

6. Skill Lab

i. Pathology
ii. Pharmacology

7. CBL

i. Pathology
ii. Pharmacology

8. Wards, operation theatres

i. Surgery
ii. Medicine
iii. Gynae& obs

# Learning Objectives Of Pathology (LGIS)

| Topic | Contents Outlines (Major Topics & Sub- Topics) | Learning objectives<br>After The Session Students Will Be Able To: | Learning domain | Teaching strategy | Assessment tool |
|---|---|---|---|---|---|
| Hypothyroidism and Thyroid Tumors | • Pathophysiology of thyroid gland<br>• Introduction types ,causes &sign symptoms of hypothyroidism<br>• Pathophysiology of Hashimoto's<br>• Thyroid function test | The students should be able to<br>1) to explain hypothyroidism<br>2)classify and explain benign and malignant neoplasms of thyroid | C2<br>C2 | LGIS | MCQs, SEQs, OSPE<br>Viva |
| Hyperthyroidism | • Introduction types ,causes &sign symptoms of hypoerhyroidism<br>• Pathophysiology of Grave's disease<br>• Thyroid function test | The students should be able to<br>1)compare and differentiate between hyperthyroidism and hypothyroidism<br>2)to describe pathophysiology of graves' disease. | C3 | LGIS | MCQs, SEQs, OSPE<br>Viva |
| Diabetics mellitus | • Introduction<br>• ,classification & causes of Diabetes Mellitus<br>• Plasma glucose regulation<br>• Pathophysiology of DM<br>• Investigation for DM | • Students should be able to<br>1) classify Diabetes Mellitus<br>2) Diagnose, and explain pathogenesis of diabetes along with glucose homeostasis. | C2<br>C3<br>C2 | LGIS | MCQs, SEQs, OSPE<br>Viva |
| Adrenal Gland/ Hyperadrena lism | • Introduction to hyperadrenalism<br>• Types<br>• Investigation of hyperadrenalism | Students should be able to<br>1)explain pathophysiology of cushing syndrome<br>2) explain the pathophysiology of hyperaldosteronism and adrenogenital syndromes | C2<br>C3 | LGIS | MCQs, SEQs, OSPE<br>Viva |
| Hypoadrenalism and adrenal tumors | • Introduction to hypoadrenalism<br>• Types<br>• Investigation of hypoadrenalism | Students should be able to<br>1) describe the pathophysiology of addisons disease and other hypoadrenal disorders<br>2)To describe the pathophysiology and microscopic features for diagnosis of adrenal cortical adenoma and carcinoma | C2, C3 | LGIS | MCQs, SEQs, OSPE<br>Viva |

# Learning Objectives Of Community Medicine (LGIS)

| Topic | Contents Outlines (Major Topics & Sub- Topics) | Learning objectives<br>After The Session Students Will Be Able To: | Learning domain | Assessment tool |
|---|---|---|---|---|
| Non-Communicable Disea<br>(Hypertension) | Epidemiology of hypertension<br>Prevention of hypertension<br>Classification<br>Rules of halves | • Differentiate between communicable and non-communicable diseases<br>• Describe the risk factors and their importance in causation of Hypertension.<br>• Apprehend the disease burden of Hypertension<br>• Classify hypertension<br>• Elaborate the rule of halves<br>• Recommend approaches to prevention and control of hypertension | C2<br>C2<br>C2<br>C2<br>C2<br>C3 | MCQs, SEQs,<br>OSPE<br>Viva |
| Non-Communicable Disea<br>(Diabetes, obesity) | Epidemiology of diabetes & obesity<br>•Prevention & control of diabetes & obesity<br>Classification of diabetes & obesity<br>Obesity assessment<br>Body mass index | • Describe the risk factors and their importance in causation of diabetes & obesity<br>• Apprehend the burden of diabetes & in Pakistan<br>• Classify diabetes & obesity<br>• Define obesity<br>• Measure obesity via different methods of obesity assessment<br>• Calculate body mass index and interpret the results<br>• Recommend approaches to prevention and control of diabetes and obesity in community | C2<br>C2<br>C2<br>C2<br>C3<br>C3<br>C3 | |
| Non-Communicable Diseases III (Cancer) | Epidemiology of cancers<br>Prevention & control of cancers<br>Warning signs of cancer | • Differentiate categories of cancers<br>• Identify epidemiology of cancers<br>• recommend the approaches for prevention of cancers in the community | C2<br>C2<br>C3 | MCQs, SEQs,<br>OSPE<br>Viva |
| Health care delivery system I | Objectives, components & models of Health care system | • Define health system<br>• Enlist health system models<br>• Comprehend components of healthcare delivery system<br>• Illustrate the functions and objectives of health system | C1<br>C1<br>C2<br>C2 | MCQs, SEQs,<br>OSPE<br>Viva |
| Health care delivery system II<br>Health care delivery system of Pakistan | Levels and functions of healthcare system<br>Tires & functions of healthcare system of Pakistan | • Describe the levels of health care system<br>• Elaborate the healthcare services available at all levels of healthcare system<br>• Describe the tires of health care system of Pakistan<br>• Discuss the functions of healthcare system of Pakistan | C2<br>C2<br>C3<br>C2 | MCQs, SEQs,<br>OSPE<br>Viva |
| Adolescent health | Normal adolescent development<br>management of adolescent related health issues | • Discuss normal adolescent development, its impact on health<br>• Counselling of adolescents with specific conditions<br>• Identification of normal growth and pubertal development<br>• Manage common health &mental health conditions, nutrition-related disorders<br>• Identify signs of substance use and substance use disorders | C2<br>C2<br>C2<br>C3<br>C2 | MCQs, SEQs,<br>OSPE<br>Viva |

# Learning Objectives Of Pharmacology (LGIS)

| Topic | Contents Outlines (Major Topics & Sub-Topics) | Learning objectives | Learning domain | Assessment tool |
|---|---|---|---|---|
| Anti-thyroid Drugs I | Thyroid preparations | • Describe different Thyroid Preparations<br>• Describe the drugs that block each step of thyroid hormone synthesis •<br>Classify Anti-thyroid Drugs | C1<br>C2<br>C2 | MCQ/SEQ |
| Anti-thyroid Drugs II | Mechanism of action<br>Adverse effects<br>Use of beta blockers in hypothyroidism | • Describe the mechanism of action & adverse effects of the groups of anti-thyroid drugs<br>• Explain the use of Beta Blockers in the treatment of Hyperthyroidism<br>• Enumerate the uses of Anti-thyroid Drugs<br>• Explain the rationale for use of different drugs in thyroid storm | C2<br>C2<br>C2 | MCQ/SEQ |
| Drugs that affect Bone Mineral Homeostasis I | principal hormonal regulators<br>pharmacokinetics and pharmacodynamics of Vitamin D | • Enumerate principal hormonal regulators of bone mineral homeostasis<br>• Explain pharmacokinetics and pharmacodynamics of Vitamin D<br>• Enumerate non hormonal agents affecting bone mineral homeostasis | C2<br>C2<br>C2 | MCQ/SEQ |
| Drugs used in Diabetes I | Oral hypoglycemics<br>Sulfonylureas<br>meglitinides | • Classify Oral Hypoglycemic<br>• Describe the mechanism of action of Sulfonylureas<br>• Compare first and second generation Sulfonylureas<br>• Describe adverse effects of sulfonylureas<br>• Describe the mechanism of action of Meglitinides<br>• Compare Sulfonylureas & Meglitinides | C2<br>C2<br>C2<br>C2<br>C2<br>C2 | MCQ/SEQ |
| Drugs used in diabetes II | Biguanides<br>Alpha-glucosidase inhibitors<br>Thiazolidinediones<br>Amylin analogs | Discuss mechanism of action & adverse effects of Biguanides<br>Differentiate between Sulfonylureas and Biguanides<br>Discuss the mechanism of action & adverse effects of Alpha-Glucosidase Inhibitors<br>Discuss the mechanism of action & adverse effects of Thiazolidinedione<br>Describe the mechanism of action & adverse effects of Amylin analogs<br>Describe the mechanism of action & adverse effects of GLP-1 analogs and Gliptins<br>Discuss uses of Oral Anti-diabetics | C2<br>C2<br>C2<br>C2<br>C2<br>C2<br>C2 | MCQ/SEQ |
| Drugs used in diabetes III | Insulin | • Classify Insulins<br>• Compare animal & human insulins<br>• Discuss kinetics of different insulins with clinical significance<br>• Describe uses & adverse effects of Insulins<br>• Describe insulin resistance | C1<br>C2 | MCQ/SEQ |
| Corticosteroid I | Classification<br>Mechanism of action | • Classify corticosteroids<br>• Describe the mechanism of action of corticosteroids | C1 | MCQ/SEQ |
| | Uses | • Describe the actions of glucocorticoids<br>• Describe the Uses of Corticosteroids | C2 | |
| Corticosteroid II | Adverse effects<br>contraindications | • Describe the adverse effects of Corticosteroids<br>• Justify the tapering off of corticosteroids<br>• Describe the contraindications of corticosteroids | C2<br>C3<br>C2 | MCQ/SEQ |

# Small Group Discussion – Pathology (SGDs)

| Demonstration | Contents Outlines (Major Topics & Sub- Topics) | Learning objectives | Learning domain | Teaching strategy | Assessment tool |
|---|---|---|---|---|---|
| Disorders of Post-Pituitary Hormones | Introduction to post pituitary gland and hormones secreted<br>Diseases /disorders of post pituitary gland<br>Investigations | Students should be able to explain hypopituitarism and posterior pituitary gland diseases | C2 | SGD | MCQs, SEQs,<br>OSPE<br>Viva |
| Parathyroid Disorders | Introduction to parathyroid disorders and its Investigations | Students should be able to explain Parathyroid Disorders, clinical features and pathophysiology | C2<br>C3 | SGD | MCQs, SEQs,<br>OSPE<br>Viva |
| Parathyroid Adenoma/carcinoma | Introduction to parathyroid adenoma /carcinoma, clinical features, pathophysiology and its Investigations | Students should be able to explain Parathyroid Adenoma/carcinoma, clinical features and pathophysiology | C2<br>C3 | SGD | MCQs, SEQs,<br>OSPE<br>Viva |
| Pancreatic tumors, Neuroendocrine | Introduction to Pancreatic tumors, Neuroendocrine, clinical features, pathophysiology and its Investigations | Students should be able to explain Pancreatic tumors, Neuroendocrine diseases | C2<br>C3 | SGD | MCQs, SEQs,<br>OSPE<br>Viva |
| Disorders of Adrenal medulla & MEN Syndrome | Introduction to adrenal medulla gland<br>Diseases /disorders of adrenal medulla<br>Features of MEN,S syndrome<br>Investigations | Students should be able to describe the pathophysiology and microscopic features of pheochromocytoma<br>to explain the diagnostic features of MEN 1 and MEN 2 syndromes. | C2<br>C3 | SGD | MCQs, SEQs,<br>OSPE<br>Viva |

## Small Group Discussion - Community Medicine (SGDs)

| Topic | Contents Outlines (Major Topics & Sub-Topics) | Learning objectives<br>At the end of session student will be able to: | Learning domain | Assessment tool |
|---|---|---|---|---|
| Health programs of Pakistan | Various primary healthcare programs | • Explain program and National Health programs.<br>• Elaborate important national health programs<br>• Enlist important National Health programs<br>• Discuss the key points regarding National Program for family planning and primary healthcare, EPI, AIDs Control program, Hepatitis control | C2<br>C2<br>C1<br>C3 | MCQs, SEQs, OSPE and Viva Voce |

## Small Group Discussion Pharmacology (SGD)

| Topic | Learning objectives<br>At the end of sessions student will be able to: | Learning domain | Assessment tool |
|---|---|---|---|
| Mineralocorticoid Antagonist | • Enumerate mineralocorticoid antagonists<br>• Describe the mechanism of action of mineralocorticoid antagonists | C2<br>C2 | MCQ |

# Case Based Learning Pathology CBL

| Topic | Contents Outlines (Major Topics & Sub-Topics) | Learning objectives At the end of session students will be able to: | Learning Domain | Assessment tool |
|---|---|---|---|---|
| Complications of Diabetes Mellitus | Pathophysiology diagnosis and complications of diabetes mellitus | • Describe in detail the complications, pathological findings and organ involvement in diabetes<br>• Explain the lab investigations required to diagnose diabetes | C2<br>C2 | MCQs |
| Pineal gland | Pathophysiology , functions, diagnosis and investigations | • Describe in detail the pathological findings<br>• Explain the lab investigations required for diagnose | C2<br>C2 | MCQs |

# Case Based Learning Pharmacology CBL

| Topic | Learning objectives<br>At the end of session student will be able to: | Learning Domain | Assessment tool |
|---|---|---|---|
| Hypothyroidism | • Describe different Thyroid Preparations<br>• Describe the drugs that block each step of thyroid hormone synthesis | C2<br>C2 | PBQ |
| Corticosteroid | • Classify corticosteroids<br>• Describe the mechanism of action of corticosteroids<br>• Describe the actions of glucocorticoids<br>• Describe the Uses of Corticosteroids<br>• Describe the adverse effects of Corticosteroids<br>• Justify the tapering off of corticosteroids<br>• Describe the contraindications of corticosteroids | C2<br>C2<br>C2<br>C2<br>C2<br>C2<br>C2 | PBQ |
| Diabetes mellitus | • Classify the drugs used in the management of DM<br>• Identify the drug group preferred in the given case | C2<br>C3 | |

# Skill Lab Pathology

| TOPIC | Contents Outlines (Major Topics & Sub-Topics) | Learning objectives<br>At the end of session student will be able to: | Learning Domain | Assessment tool |
|---|---|---|---|---|
| Thyroiditis, Multinodular goiter | Classify and identify various types of thyroiditis & Multinodular goiter | • Classify different types of thyroiditis<br>• Identify gross features and microscopic features such as Massive lymphoplasmacytic infiltration with lymphoid follicles formation and large active germinal center in Hashimoto's thyroiditis<br>• Explain the gross features asymmetrically enlarged gland with Irregular nodules and microscopic features such as varied sized dilated follicles with hyperplastic epithelium in multinodular goiter and grave's disease<br>• Identify microscopic features such as closely packed small follicles lined by cuboidal epithelium, within a fibrous capsule in follicular adenoma<br>• Identify gross and microscopic features as complex, branching, randomly oriented papillae with fibrovascular cores and specific nuclear features in papillary carcinoma of thyroid | C1<br>C2<br>C2<br>C2<br>C2 | OSPE/OSCE |
| Chronic pancreatitis & pancreatic carcinoma | Pancreatic pathologies and differences between them | • Identify and explain the gross and microscopic features of chronic pancreatitis<br>• Differentiate between normal pancreas and pancreatic adenocarcinoma /pancreatic carcinoma.<br>Differentiate between pancreatic carcinoma and chronic pancreatitis | C2<br>C3<br>C3 | OSPE/OSCE |
| Parathyroid adenoma/carcinoma | Pathogenesis of parathyroid adenoma | • Identify and explain the gross and microscopic features of pituitary adenoma<br>Identify and explain the gross and microscopic features of parathyroid adenoma and how to differentiate it from carcinoma | C2<br>C2,C3 | OSPE/OSCE |

# Skill Lab Pharmacology

| Code | TOPIC | Learning objectives<br>At the end of session student will be able to: | Learning domain | Assessment tool |
|---|---|---|---|---|
| | | | | |
| Practical | P-Drug & Prescription writing | P -Drug and prescription writing on<br>• Diabetes Mellitus type II<br>• Graves Disease<br>• Adrenal Insufficiency | C2 | OSPE |

# Self-directed learning session

## Self-Directed Learning (SDL) Pathology

| SR. NO. | TOPIC | LEARNING OUTCOMES<br>At the end of session students will be able to: | REFERENCE |
|---|---|---|---|
| 01 | contributions of the endocrine system to homeostasis | • The student should be able to:<br>• Describes the effects of endocrine system on homeostasis. | Robin Basic Pathology 10th Edition<br>Chapter Endocrine System<br>Page: 749 |
| 02 | Summarize the site of production, regulation, thyroid gland | • Discuss steps of production and regulation of Thyroid hormone | Robin Basic Pathology 10th Edition<br>Chapter Endocrine System Page: 755 – 756 |
| 03 | Investigations of a case of goiter | • Know basic laboratory investigations of a case of Goiter | Robin Basic Pathology 10th Edition<br>Chapter Endocrine System Page: 762 – 763 |
| 04 | Investigations of Diabetes Mellitus | • Know basic laboratory investigations of a case of Diabetes Mellitus | Robin Basic Pathology 10th Edition<br>Chapter Endocrine System Page: 772 |

# Self-Directed Learning Pharmacology SDL

| SR. NO | TOPIC | LEARNING OUTCOMES<br>At the end of session students will be able to: | REFERENCE |
|---|---|---|---|
| 1 | Post covid incidence of thyroid diseases and their pharmacological treatment | • define hypothyroidism<br>• Corelate lab results of thyroid function tests and patient's symptoms<br>• Discuss pathophysiology of thyroid disease in association with covid<br>• Discuss the role of drugs used for hypothyroidism in post covid patients | Thyroid and COVID-19: a review on pathophysiological, clinical and organizational aspects<br>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7992516/#:~:text=Thyroid%20and%20COVID%2D19%3A%20a%20review%20on%20pathophysiological%2C%20clinical%20and%20organizational%20aspects<br>The Association Between COVID-19 and Thyroxine Levels: A Meta-Analysishttps://www.frontiersin.org/articles/779692 |
| 2 | Bisphosphonates and bone mineral diseases | • Classify drugs used for bone mineral diseases<br>• Describe mechanism of action and uses of bisphosphonates<br>• Describe adverse effects of bisphosphonates | The Effect of Bisphosphonates on Fracture Healing Time and Changes in Bone Mass Density: METAAnalysishttps://www.frontiersin.org/articles/10.3389/fendo.2021.688269/full#:~:text=10.3389/fendo.2021.688269-,The%20Effect%20of%20Bisphosphonates%20on%20Fracture%20Healing%20Time%20and%20Changes%20in%20Bone%20Mass%20Density%3A%20A%20Meta%2DAnalysis, A Multicenter Observational Cohort Study to Evaluate the Effects of Bisphosphonate Exposure on Bone Mineral Density and Other Health Outcomes in Osteogenesis Imperfectahttps://asbmr.onlinelibrary.wiley.com/doi/abs/10.1002/jbm4.10118 |
| 3 | Nuclear receptors coactivators | • Descried Steroid receptor signaling mechanisms<br>• Discuss the role of coactivators in steroid receptor functioning<br>• Enumerate the drugs acting through steroid receptor activation | Nuclear Integration of Glucocorticoid Receptor and Nuclear Factor-κB Signaling by CREB-binding Protein and Steroid Receptor Coactivator-1*<br>https://www.jbc.org/article/S0021-9258(19)59316-4/fulltext#:~:text=Nuclear%20Integration%20of%20Glucocorticoid%20Receptor%20and%20Nuclear%20Factor%2D%CE%BAB%20Signaling%20by%20CREB%2Dbinding%20Protein%20and%20Steroid%20Receptor%20Coactivator%2D1* |

| | | | |
|---|---|---|---|
| 4 | DPP-4 INHIBITORS AND PANCREATIC CARCINOMA | | Dipeptidyl Peptidase-4 Inhibitor–Associated Pancreatic Carcinoma<br><br>https://journals.sagepub.com/doi/abs/10.1177/1060028015610123?journalCode=aopd#:~:text=Dipeptidyl%20Peptidase%2D4%20Inhibitor%E2%80%93Associated%20Pancreatic%20Carcinoma |
| | | | Risk of dipeptidyl peptidase- 4 **(DPP-4) inhibitors** on site- specifi **cancer**: A systematic review and meta-analysis<br>https://onlinelibrary.wiley.com/doi/abs/10.1002/dmrr.3004 |

# Self-Directed Learning community medicine (SDL)

| # | Topics | Learning objectives.<br>Students will be able to … | Learning resource |
|---|---|---|---|
| 1 | Epidemiology of Stroke | • Describe problem statement of stroke.<br>• Risk factors of stroke<br>• Strategies for stroke control in population | K Park Ed. 27th (377-78) |
| 2 | Epidemiology of Rheumatic Heart disease (RHDs) | • Describe problem statement of RHDs.<br>• Epidemiological factors of RHDs.<br>• WHO criteria for diagnosis of RHDs<br>• Approaches for Prevention of RHDs in population | K Park Ed. 27th (378-81) |
| 3 | Intro to selected important relevant concepts of sociology relevant to epidemiology & medical research | • Comprehend definitions of, Society, community, social structure & institution, social control mechanisms,<br>• Comprehend customs, culture, social problems, social pathology, case study & field study. | K Park Ed. 27th (67073) |

# Peer Assisted Learning (PAL) IUGRC Contact Session Contact Session III Time Duration; 2hrs/batch

| Indictors of accomplishment Prior readings / assigned work | Learning objectives/ competencies | Learning outcomes<br>By the end of lecture student will be able to: | Assessment strategy |
|---|---|---|---|
| Endo session 1<br>Finalization of questionnaire and layout of work plan<br>(Gantt chart)<br>Development & finalizing; Study variables, data analysis plan, use of relevant statistical measures, data collection tool development, addressing ethical aspects of SGRP and preparing Gantt chart<br><br>Endo session 2<br>Data Collection (Pilot Project)<br>Demonstrate<br>- Needed skills &behavior for data collections,<br>- How addresses logistic & field issues<br>- How perform data cleaning, feeding, and organizing skills<br>- Proper Use Computer skills & soft ware | • Identify relevant and statistically appropriate study variables.<br>• Develop appropriate data analysis plan,<br>• Decide use of relevant statistical tests<br>• Decide sampling method & calculate sample size<br>• Develop data collection tool & decide data collection technique<br>- Apply principles of research ethics in SGRP specifically informed consent, confidentiality of information Practice right skills & behavior while collecting data from human subjects or form healthcare practicing sites or form population settings<br>- Organizing and analyzing data collected<br>- Interpreting and inferring on pre-determined study objectives like frequency of disease, variables suitability, pilot test of questionnaire | • Finalize study variables, data analysis plan, application of relevant statistical tests<br>• Appreciate relevant sampling and data collection technique<br>• Finalize data collection tool / questionnaire according to study objectives and variables and in accordance to information required from target respondents<br>• Develop Gantt chart for study timeline<br>• Develop informed consent form for the SGRP study<br>By the end of session 2, students should be able to;<br>-compile & interpret pilot study data<br>-make observable improvements or changes in data collection skills & behaviors if required<br>-Record take measures to address logistic issues reported like lack of equipment ,facilities ,need assessment for prior data collection training , poor quality assurance, language barriers , systematic errors | MCQ in each block exam Viva exam at the end of the session |

| | | | |
|---|---|---|---|
| | validity and reliability ,subject coordination or response rate, margin for attrition / sample size<br>• Take measures to address logistic and other issue faced if any | -Address ethical concerns of study if any encounter during pilot project | |

# VERTICALLY INTEGRATED CLINICAL SUBJECTS

## Learning Objectives Of Surgery (LGIS)

| Topic Of The Session | Contents Outlines (Major Topics & SubTopics) | Learning Objectives<br>At the end of session student will be able to: | Learning Domain | Assessment tools |
|---|---|---|---|---|
| Surgical intervention of parathyroid gland | Surgical anatomy of parathyroid gland, managing patient with parathyroid pathology | • Discuss the surgical anatomy of parathyroid gland<br>• Enlist diseases treatable with surgery<br>• Discuss briefly parathyroid adenoma, hyperplasia and carcinoma<br>• Outline pre-operative work up for parathyroid gland<br>• Approach towards a patient with parathyroid pathology. | C2<br>C1<br>C2<br><br><br>C2<br><br>C2 | MCQ/SEQ |
| Surgical intervention of pancreatic tumor | Surgical diseases of pancreas and their management | • Discuss the surgical anatomy of pancreas<br>• Explain the prevention of pancreatic tumors<br>• Enlist the surgical diseases of pancreas<br>• Approach towards a patient with suspected SOL in pancreas<br>• Do pre-operative preparation of patient with SOL<br>• Elaborate the protocol for surgery of distal pancreas | C2<br>C2<br>C1<br>C3<br><br>C2 | MCQ/SEQ |
| Surgical intervention of adrenal gland | Surgical anatomy and surgical intervention of adrenal gland | • Discuss the surgical anatomy of adrenal gland<br>• Approach adrenal towards a patient with incidental SOL in gland<br>• Describe pheochromocytoma<br>• Illustrate pre-operative workup for pheochromocytoma<br>• Prepare a patient for pheochromocytoma<br>• Discuss Surgical procedure for pheochromocytoma including minimally invasive surgery | C2<br>C2<br><br>C2<br>C2<br>C3<br>C2 | MCQ/SEQ |

# Learning Objectives Of Medicine (LGIS)

| Topic Of The Session | Contents Outlines (Major Topics & SubTopics) | Learning Objectives<br>At the end of session student will be able to: | Learning Domain | Assessment tools |
|---|---|---|---|---|
| Acromegaly | Clinical features & investigations of acromegaly along with its management | • Identify clinical presentation and physical findings in acromegaly.<br>• Describe laboratory workup of acromegaly.<br>• Explain various therapeutic options in management of acromegaly<br>• Recall clinical conditions associated with acromegaly. | C2<br>C2<br>C2<br>C2 | MCQ/SEQ |
| Diabetes Insipidus | Clinical features & management of diabetes insipidus | • Explain the clinical presentation and physical findings in DI.<br>• Differentiate between central DI and nephrogenic DI and describe etiology of both types.<br>• Describe importance of water deprivation test in diagnosis and differentiation between both types of DI<br>• Discuss various treatment options available for management of diabetes insipidus. | C2<br>C3<br>C2<br>C2 | MCQ/SEQ |
| Hypothyroidism | Causes, C/F , investigations, treatment & complications of hypothyroidism | • Define hypothyroidism<br>• Discuss Causes of hypothyroidism<br>• Discuss clinical features (especially congenital hypothyroidism)<br>• Discuss lab investigations and their interpretation.<br>• Treatment and plan of management<br>• Discuss Complications and counseling aspects | C1<br>C2<br>C2<br>C3<br>C2<br>C3 | MCQ/SEQ |
| Hyperthyroidism | Thyroiditis & Grave's disease | • Compare and differentiate between hyperthyroidism and hypothyroidism<br>• Explain thyroiditis and graves' disease. | C3<br>C2 | MCQ/SEQ |

| | | | | |
|---|---|---|---|---|
| Thyroid Disorders-I | Comparison of hyper and hypo thyroidism | • Enlist various types of thyroid disorders.<br>• Differentiate between clinical features of hyperthyroidism and hyperthyroidism. | C1 | MCQ/SEQ |
| Thyroid Disorders | Graves disease & managing thyroid disorders in pregnancy | • Describe clinical presentation, diagnosis and management of Grave's disease.<br>• Discuss the management plan of thyroid disorders in pregnancy | C2<br>C3 | MCQ/SEQ |
| Diabetes and Hypoglycemia | | • Enlist types of diabetes mellitus.<br>• Diagnose diabetes mellitus.<br>• Develop management plan for diabetes mellitus, including both pharmacological and nonpharmacological therapies. | C2<br>C3<br>C3 | MCQ/SEQ |
| Diabetes Mellitus/DKA I | C/F of diabetic ketoacidosis and its diagnosis | • Define Diabetes ketoacidosis<br>• Discuss its clinical features<br>• Plan relevant investigations | C1<br>C2<br>C3 | MCQ/SEQ |
| Diabetes and Hypoglycemia | Managing complication of DM | • Diagnose and manage complications of diabetes mellitus.(DKA, HONK)<br>• Identify clinical features of hypoglycemia and discuss management plan. | C3<br>C2 | MCQ/SEQ |
| Diabetes Mellitus/DKA | Managing DKA | • Discuss complications of diabetes mellitus<br>• Discuss treatment and management plan. • Outline DKA and its management<br>• Counsel the parents.<br>• Do follow-up | C2<br>C2<br>C3<br>C2 | MCQ/SEQ |
| Cushing's Syndrome and Addison's Disease | C/F, diagnosis, causes and management of Cushing's Syndrome and Addison's Disease | • Identify clinical presentation of Cushing's disease and describe diagnostic workup and management plan of Cushing's syndrome.<br>• Differentiate between Cushing's disease and syndrome. • Enlist various causes of Cushing's syndrome<br>• Identify causes and clinical features of Addison's disease<br>• Differentiate between primary and secondary Addison's disease | C3<br>C2<br>C1<br>C2<br>C2 | MCQ/SEQ |

# Learning Objectives Of Obstetrics And Gynecology (LGIS)

| Topic Of The Session | Contents Outlines (Major Topics & Sub-Topics) | Learning Objectives | Learning Domain | Assessment tools |
|---|---|---|---|---|
| Thyroid in pregnancy | C/F of thyroid disorders in pregnancy & management | • Enlist thyroid disorders during pregnancy<br>• Illustrate clinical presentation of thyroid disorders in pregnancy<br>• Discuss feto-maternal effects of thyroid disorder<br>• Discuss the management of these disorders | C1<br>C2<br><br>C2<br>C3 | MCQ/SAQ |
| DM in pregnancy | Diagnosing gestational diabetes & its management | • Define different types of diabetes during pregnancy<br>• Discuss screening for diagnosis of gestational diabetes<br>• Elaborate management of diabetes | C1<br>C2<br>C2 | MCQ/SAQ |
| Complications of Diabetes & Gestational diabetes | Pathophysiology diagnosis and complications of gestational diabetes | • Describe in detail the complications, pathological findings and organ involvement in diabetes and gestational diabetes<br>• Explain the lab investigations required to diagnose diabetes | C2<br><br>C2 | MCQ/SEQ |

# Learning Objectives Of Pediatrics (LGIS)

| Topic Of The Session | Contents Outlines (Major Topics & Sub-Topics) | Learning Objectives (At the end of session students will be able to learn) | Learning Domain | Assessment tools |
|---|---|---|---|---|
| Diabetes Mellitus | Diabetes mellitus and its complications | • Explain pathophysiology and clinical presentation of Diabetes Mellitus<br>• Plan relevant investigations<br>• Recognize complications of diabetes mellitus<br>• Manage disease and its complications<br>• Counsel the parents and patient | C2<br>C3<br>C2<br>C3<br>C3 | MCQ/SAQ |
| Hypothyroidism | Hypothyroidism and its clinical presentation | • Enlist causes<br>• Discuss clinical presentation at various ages<br>• Plan, interpret Investigations and take appropriate action<br>• Treat and counsel the parents<br>• Do follow-up | C1<br>C2<br>C3<br>C3<br>C3 | MCQ/SAQ |

# Learning Objectives Of Bioethics (LGIS)

| Broad topic | Major syllabus with sub-topics | Learning objectives | Learning domain | Assessment tools | Suggested reading sources |
|---|---|---|---|---|---|
| Doctor -patient relationship | Discussion will cover;<br><br>• Doctor-patient relationship – Confidentiality – Truth telling /disclosure – Informed consent | At the end of the session students should be able to;<br><br>• Discuss the ethical principles applicable within the doctor patient relationship<br>• Describe the different types of consent and the situations in which obtaining consent is required<br>• Recognize the importance of telling the patient the truth about his/ her medical condition<br>• justify when it is important to withhold information from a patient/ relative<br>• Analyze the doctor's role when there is disagreement between the doctor's view and the views of patient, guardians or relatives<br>• Demonstrate understanding of the elements and process of informed consent in research | C2<br>C2<br>C2<br>C3<br>C2 | 1 MCQs of level C1 to C3 will cover this session teachings in relevant block examination<br><br>Result / marks obtained will contribute towards Internal assessment (IA) in 4th Prof. MBBS exam. | http://nbcpakistan.o rg.pk /assets/may-16bioethicsfacilitator-book---may-16%2c-2017.pdf (page 54)<br><br>WHO Module for Teaching Medical Ethics to Undergraduate.pdf (page 9) |

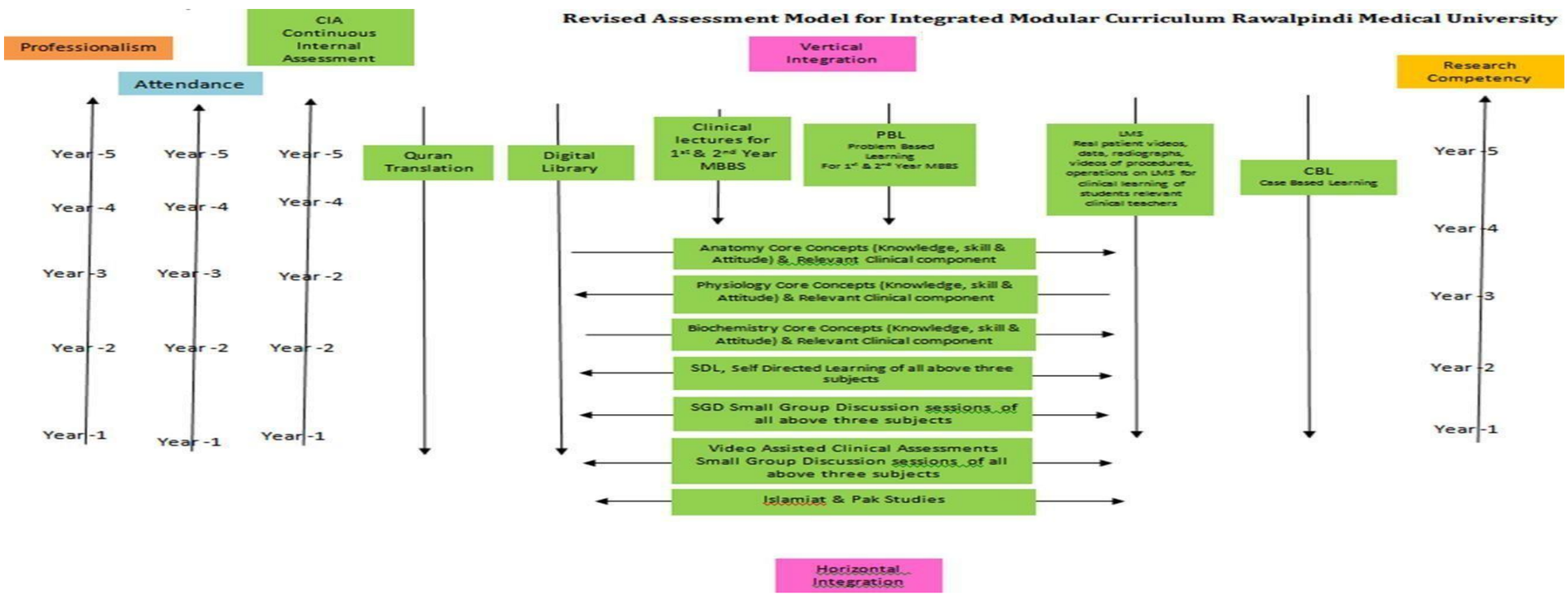
# Learning Objectives Of Family Medicine (LGIS)

| Broad topic | Major syllabus with subtopics | Learning objectives | Learning domain | Assessment tools |
|---|---|---|---|---|
| Core concepts of family medicine in (Noncommunicable diseases) | Discussion will cover;<br><br>Diabetes mellitus and obesity its psychological impacts on families | At the end of the session students should be able to;<br><br>• Explain the management strategies of a diabetic patient in general practice including the psychosocial impact of disease on patient and their families<br>• Describe the strategies for prevention of diabetes mellitus and its complications<br>• Identify the red-flags in a diabetic patient and appropriately refer to specialty care when required<br>• Describe the aetiology, risk factors and complications of obesity<br>• Explain the role of diet, exercise and anti-obesity drugs in the management of obesity and its complications<br>• Identify the red-flags in an obese patient and appropriately refer to specialty care when required<br>• Explain the psychosocial impact of disease on patient and their families | C3<br><br>C2<br><br>C2<br><br>C2<br><br>C2<br><br>C3 | MCQS |

# 9- Assessment Policies:

CONTENTS:

1. Assessment Plan
2. Types of Assessment
3. Modular Examinations
4. Block examinations



**Gauge for Continuous Internal Assessment (CIA)**

| Red Zone | High Alert | Yellow Zone | Green Zone | Excellent | Extra Ordinary |
|---|---|---|---|---|---|
| 0 - 25% | 26 - *50% | 51 - 60% | 61 – 70% | 71 – 80% | 81 - 100% |

*50% and above is Passing Marks.

**Gauge for attendance percentage**

| Red Zone | High Alert | Yellow Zone-1 | Yellow Zone-2 | Green Zone | Excellent |
|---|---|---|---|---|---|
| 0 - 25% | 26 - 50% | 51 - 60% | 61 – 74% | *75 – 80% | 81 - 100% |

*75% is eligibility criteria for appearing in professional examination.

# 10- Assessment Plan

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

## Types of Assessment:

The assessment is formative and summative.

Formative Assessment: Formative assessment is taken from topics of SDL, SGD (MS TEAM).

Summative Assessment: Summative assessment is taken at the mid modular, modular/block levels. Modular

## Examinations

Theory Paper:

There is a module examination at the end of first module. The content of the whole teaching of the module are tested in this examination.

It consists of paper with objective type questions and structured essay questions. The distribution of the questions is based on the Table of Specifications of the module.

Viva Voce:

Structured table viva voce is conducted including the practical content of the module. Block

## Examination

On completion of a block which consists of two modules, there is a block examination which consists of one theory paper, viva and OSPE.

Theory Paper

There is one written paper for each subject. The paper consists of objective type questions and structured essay questions. The distribution of the questions is based on the Table of Specifications of the module.

Block OSPE: This covers the practical content of whole block.

# Assessment

## Types of Assessment:

1. Formative
2. summative

### Formative Assessment

Formative assessment will be done at the mid of module through LMS at mid of 2nd week. Assessment of clinical lectures will also be on LMS. Tool for this assessment will be one best choice question.

### Summative Assessment:

Summative assessment will be taken at the end of module/ block and will be subject wise

# Assessment Frequency & Time in Endocrinology Module

| Bloc k | | endocrinology Module | Type of Assessments | | Total Assessments Time | | No. of Assessments | |
|---|---|---|---|---|---|---|---|---|
| endocrinology module | Sr # | Types of Assessments | Nature of assessment | Assessment Time | Summative Assessment Time | Formative Assessment Time | | |
| | 1 | Mid Module Examinations<br>(pathology5, Community Medicine5, pharmacology5)<br>( 20 MCQs) 20 marks | Formative | 20 Minutes | 230 minutes<br>(3 hours,50min) | 30 Minutes | 2-3 Formative | 2 Summative |
| | 2 | SDL<br>Examinations (2-3) on LMS<br>( 10 MCQs) each exam 10 marks | Formative | 10 Minutes | | | | |
| | 3 | End Module Examinations | Summative | Detailed below | | | | |
| | | Breakup of EOM Assessment | | | | | | |
| | | i. Community medicine<br>(2 SEQs and 20 MCQs) 30 marks | Summative | 50 Minutes | | | | |
| | | ii. Pathology<br>(5 SEQ&25MCQs) 50 marks | Summative | 60min | | | | |
| | | iii. pharmacology<br>(6 seq 10 MCQs) 40 marks | Summative | 60 Minutes | | | | |
| | 4 | iv. Ward test at the end of two weeks rotation in clinical subjects &<br>End of clerkship C med (OSPE) 40 marks | Summative | 40-60 minutes | | | | |
| | | | | | | | | |

# Types Of Assessment Community Medicine

| S. No | Mode of Assessment | Type of Assessment | Schedule of Assessment | Venue | Frequency |
|---|---|---|---|---|---|
| 1. | MCQ based Test | formative | Weekly SDL test | LMS / MS team | 01 x no. of weeks |
| 2. | One best option MCQs test | formative | Mid module during 2nd week | LMS | 01 |
| 3. | Theory (MCQ+SEQ) and Viva Exam | Summative | End of module exam | On campus test | 01 |
| 4. | End of clerkship Exam (OSCE, MCQs, OSPE ) | Summative | (OSCE, MCQs, OSPE ) | On campus | 01 |

# Type Of Assessment Pharmacology Department

| S. No | Mode of Assessment | Type of Assessment | Schedule of Assessment | Venue | Frequency |
|---|---|---|---|---|---|
| 1. | MCQ | formative | Weekly SDL test | LMS | 01x no.of weeks |
| 2. | One best option MCQs test | formative | Mid module during 2nd week | LMS | 01 |
| 3. | Theory (MCQ+SEQ) | Summative | End of module exam | On campus test | 01 |
| | Practical (VIVA) | | | | |

# Types Of Assessment Pathology Department

| S. No | Mode of Assessment | Type of Assessment | Schedule of Assessment | Venue | Remarks |
|---|---|---|---|---|---|
| 1 | MCQ | Formative | Weekly SDL test | LMS | 1per wk |
| 2 | One best option MCQs test | formative | Mid module during 2nd week | LMS | 01 |
| 3 | MCQ, SEQs, based examination<br>OSPE<br>Viva Exam | summative | End of module /block exam<br>“ | On campus test | 01 |

# Table of Specification (TOS)

## Endocrinology mid-module assessment

| Sr. # | Discipline | No. of MCQs | No. of MCQs according to cognitive domain | | |
|---|---|---|---|---|---|
| | | | C1 | C2 | C3 |
| 1. | Pathology | 5 | 01 | 03 | 01 |
| 2. | Community Medicine | 5 | 01 | 03 | 01 |
| 3. | Pharmacology | 5 | 01 | 03 | 01 |
| 4. | Vertically integrated subjects | 5 | 01 | 03 | 01 |
| | Total | 20 | | | |

# Endocrinology End of Module Assessment

| Sr. # | Major subjects of the module to be assessed | No. of MCQs ff each subject | No. of MCQs according to cognitive domain | | | No. of SAQs (%) | | No. of SAQs according to cognitive domain | | | viva | | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | C1 | C2 | C3 | No. of items | Marks | C1 | C2 | C3 | | | |
| 1. | Pathology | 25 | 05 | 10 | 10 | 05 | 25 | 1 | 2 | 2 | 20 | | 70 |
| 2. | pharmacology | 10 | 03 | 03 | 04 | 06 | 30 | 2 | 3 | 2 | 20 | | 60 |
| 3. | Community Medicine | 20 | 05 | 06 | 09 | 02 | 10 | | 1 | 1 | 15 | | 50 |
| | Total MCQs Marks | 55 | | | | | 65 | | | | 55 | | |
| | | | | | | | | | | Grand Total | | 175 | |

# 11- Timetable

## Staff / Human Resource Distribution of Department of Pathology

| Sr.no. | Designation | Total number of teaching staff |
|---|---|---|
| 1 | Professor | 02 |
| 2 | Associate professor | 02 |
| 3 | Assistant professor | 04 |
| 4 | Demonstrators | 12 |

## Detail of Contact hours (faculty) & contact hours (students)

| Sr. no. | Hours Calculation for Various Type of Teaching Strategies | Total Hours (Faculty) | Total Hours (Students) | Faculty level |
|---|---|---|---|---|
| 1 | LGIS (5). 1hrs each session (half class sessions) | 2 x 5= 10 hrs. | 5 | Professor, associate, and assistant professors |
| 2 | SGD (5) approx. 1hrs each session. 1/4$^{th}$ class | 2 x 5= 10hrs. | 5 | Assistant professors |
| 3 | CBL(IUGRC) (2) approx. 1hrs per session. (4 small group sessions. 1session per day) | 2 x 4 = 8hrs. | 2 | Demos (subject specialists) supervised by professional faculties |
| 4 | SDL (4) | 1 x 4 = 4 hrs. | 4 | Demos (subject specialists) |
| | | Total: 32hrs | 16 hrs | |

# Categorization Of Modular Content Of Pathology Department

| Category A* | Category B** | | Category C*** | | |
|---|---|---|---|---|---|
| LGIS | LGIS | SGDs | SDL | | CBL |
| Hypothyroidism and Thyroid Tumors | Adrenal Gland/ Hyperadrenalism | Disorders of Post-Pituitary Hormones | contributions of the endocrine system to homeostasis. | | Complications of Diabetes Mellites |
| Hyperthyroidism | Hypoadrenalism and adrenal tumors | Disorders of Adrenal medulla & MEN Syndrome | Summarize the site of production, regulation, thyroid gland | | Pineal gland |
| Diabetics mellitus | | Parathyroid disorders | Investigations of a case of goiter | | |
| | | Parathyroid Adenoma /carcinoma | Investigations of Diabetes Mellitus | | |
| | | Pancreatic tumors and neuroendocrine disorders | | | |

Category A*: Fundamental & Complex Concepts taken by Professors, Assc Prof and Assistant Professors

Category B**: Intermediate concepts. Exercises. By Professorial faculty and Senior Demonstrators/ subject specialists.

Category C***: Relatively lower complex concepts, exercises/ applications. By Assistant professors, Demonstrators)

# Ranking Of The Content Of Community Medicine

| Category A* | Category B** | Cat | egory C*** | |
|---|---|---|---|---|
| LGIS | LGIS | SDGS | SDL | IUGRC SESSIONS (PAL) |
| Fundamental concepts of epidemiology, prevention & control of non-communicable diseases( NCDs I) risk factors of hypertension, CHD, Stroke | Health systems I | Health programs in Pakistan | Epidemiology of Stroke | Finalization of questionnaire and layout of work plan |
| Fundamental concepts of of epidemiology, prevention & control of noncommunicable diseases( NCDs II) diabetes | Health systems II | | Epidemiology of Rheumatic Heart disease (RHDs | Endo session 2 Data Collection (Pilot Project |
| Fundamental concepts of of epidemiology, prevention & control of noncommunicable diseases( NCDs III) Cancers | Adolescent health | | Intro to concepts of sociology relevant to epidemiology & medical research | |

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

## Staff / Human Resource of Department of Community Medicine

| Sr.no. | Designation | Total number of teaching staff |
|---|---|---|
| 1 | Professor | 01 |
| 2 | Associate professor | 02 |
| 3 | Assistant professor | 04 |
| 4 | demonstrators | 05 |
| 5 | PGTs | 05 |

## Detail of Contact Hours community medicine (Faculty & Students)

| Sr. no. | Hours Calculation for Various Type of Teaching Strategies | Total Hours (Faculty) | Total Hours (Students) | Faculty level |
|---|---|---|---|---|
| 1 | LGIS (6). 1hrs each session (half class sessions) | 2 x 6= 12 hrs. | 6 | Professor, associate, and assistant professors |
| 2 | SGD (2) approx. 2hrs each session. 1/2class | 1 x 4= 4 hrs. | 4 | Demos (subject specialists), Senior PGTs |
| 3 | PAL (IUGRC) (1) approx. 2hrs per session. (16 small group sessions. 8 sessions per day) | 2 x 16 =32hrs. | 2 | Demos (subject specialists) supervised by senior faculties |
| 4 | SDL (3) | 3 x 1 =3 hrs. | 3 | Demos (subject specialists) |
| | | Total: 51hrs | 15hrs | |

## Human Resource Distribution of Department of Pharmacology

| Sr.no. | Designation | Total number of teaching staff |
|---|---|---|
| 1 | Professor | 00 |
| 2 | Associate professor | 01 |
| 3 | Assistant professor | 03 |
| 4 | Demonstrators | 07 |
| 5 | PGTs | 0 |

## Detail of Contact hours (faculty) & contact hours (students)

| Sr. no. | Hours Calculation for Various Type of Teaching Strategies | Total Hours (Faculty) | Total Hours (Students) | Faculty level |
|---|---|---|---|---|
| 1 | LGIS (08). 1hrs each session (half class sessions) | 2 x 08= 16 hrs. Facilitator x hours | 8 | Professor, associate, and assistant professors |
| 2 | SGD/ (2) approx. 1hrs each session. 1/4$^{th}$ class | 4 x 2= 8 hrs. Facilitator x hours | 2 | Demos (subject specialists), Senior PGTs |
| 3 | Practicals(1) approx. 2hrs per session | 2 x 4 =08 hrs. Facilitator x hours | 2 | Demos (subject specialists) supervised by professional faculties |
| 4 | CBL (3) | 4 x 3 =12hrs. Facilitator x hours | 3 | Demos (subject specialists) |
| | | Total: 44 | 15 hrs | |

## Categorization Of Modular Content Of Pharmacology Department

| Category A* | Category B** | | Category C*** | |
|---|---|---|---|---|
| LGIS | PRACTICALS | SDGS/CBLS | SDL | |
| ALL | ALL | ALL | ALL | |

Category A*: Fundamental & Complex Concepts taken by Professors, Associate Professors and Assistant Professors

Category B**: Intermediate concepts. Exercises. By Professorial faculty and Senior Demonstrators/ subject specialists.

Category C***: Relatively lower complex concepts, exercises/ applications. By Assistant professors, Demonstrators

## Tentative Time Table 4th Year MBBS-Endocrinology Module 2023 (1st Week)

| DATE / DAY | 8:00 AM – 9:00 AM | | 09:00am – 10:00am | | BREAK 10:00AM – 10:30 Am | 10:30am – 12:00pm | 12:00pm - 02:00pm |
|---|---|---|---|---|---|---|---|
| Monday 29.5.23 | Medicine (LGIS) | | Community Medicine (LGIS) | | | CLINICAL CLERKSHIP of community medicine attached as annexures at the end of document<br>Community oriented clerkship and other rotations will remain same. These will be completed at end of yr. | |
| | Acromegaly | | NCDS I, HTN, CHD | | | | |
| | Odd/ lec hall 1 | Even/ lec lall 2 | Odd/Lec hall 1 | Even/Lec hall 2 | | | |
| | Dr Sara Mustfa MUI BBH | Dr Mujeeb HFH | Prof Arshad sabir | Dr. Sana Mzhar | | | |
| Wednesday 31.5.23 | Pathology (SGD) | | Medicine (LGIS) | | | | |
| | Posterior Pituitary Harmones and their Disorders | | Diabetes Insipidus | | | | |
| | lec hal1 1&2 | Lec hall 6&3 | Odd/lec hall 1 | Even/Lec hall 2 | | | |
| | DR Fatima, Dr Rabiya Khalid | Dr Aasia, Dr Tayyaba | Dr Sara Mustfa MUI BBH . | Dr Mujeeb HFH | | | |
| Thursday 1.6.23 | Pathology (LGIS) | | Ethics (LGIS) | | | | |
| | Hypothyroidism and Thyroid Tumors | | Informed consent | | | | |
| | Lec hall 1 | Lec hall 2 | Lec hall 1 | Lec hall 2 | | | |
| | Prof Mobeena | Prof Wafa | Prof Arshad Sabir | Dr Khola Noreen | | | |

| | 08:00AM – 09:45AM | | 09:45AM – 10:30 | | 10:30AM – 11:15AM | | 11:15AM – 12:00PM | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Friday 2.6.23 | PAL/skill lab | | Pathology (LGIS) | | Pharmacology (LGIS) | | Medicine (LGIS) | | | | | |
| | Community Medicine / Pathology IUGRC Session / Thyroiditis, Multinodular goiter -I | | Hyperthyroidism | | Anti-thyroid Drugs classification | | Thyroid Disorders 1 | | | | | |
| | Batch A-H | Batch I-P | Odd/Lec Hall 4 | Even/Lec Hall 5 | Odd/Lec hall 4 | Even/Lec hall 5 | Odd/Lec hall 4 | Even/Lec hall 5 | | | | |
| | All Demonstrators C Med Dept | Dr Amina Noor Patho Lab | Prof Mobeena | :Prof Wafa | Dr Attiya | :Dr. Zunaira | Dr Sara Mustfa MUI BBH | Dr Mujeeb HFH | | | | |
| Saturday SEMINAR THYROID | 08:00AM – 09:45AM | | 09:45AM – 10:30 | | 10:30AM – 11:15AM | | BREAK 11:15 AM – 11:45 AM | 11:45AM – 12:30PM | | 12:30PM – 01:15PM | | 01:15PM – 02:00PM | |
| | PAL / skill lab Community Medicine / Pathology IUGRC Session / Thyroiditis, Multinodular goiter -II | | Pharmacology (LGIS) Anti-thyroid Drugs( Mechanism of Action & Adverse Effects) | | Pediatrics (LGIS) Hypothyroidism | | | Medicine (LGIS) Thyroid Disorders II | | Gynae (LGIS) Thyroid in Pregnancy | | Surgery (LGIS) Surgical Intervention In Thyroid Disease | |
| 3.6.23 | Batch I-P | BatchA-H | Even/ hall 4 | Odd/ hall 5 | Even// hall 4 | odd /hall 5 | | Even/hall 4 | Odd/ hall 5 | Even /hall 4 | Odd/hall 5 | Even/hall 4 | Odd/hall 5 |
| | All demonstrators C Med Dept | Dr. Amina Noor | Dr Attiya | : Dr. Zunaira | Dr Assad shabir | Dr.Mudassar Sharif | | Dr Sara Mustfa MUI BBH | Dr Mujeeb HFH | Dr Saima Khan | Dr. Ammarah Urooj | Dr Ali kamran | Dr. Sarmad Arsalan |

# Tentative Time Table 4th Year MBBS-Endocrinology Module 2023 (2nd WEEK)

| DATE / DAY | 8:00 AM – 9:00 AM | | 09:00am – 10:00am | | BREAK 10:00AM – 10:30 AM | 10:30am – 12:00pm | 12:00pm - 02:00pm | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Monday 5.6.23 | Pharmacology (CBL) | | Community Medicine (LGIS) | | | CLINICAL CLERKSHIP of community medicine attached as annexures at the end of document<br>Community oriented clerkship and other rotations will remain same. These will be completed at end of yr. | | | | | | |
| | Hyperthyroidism (Clinical Pharmacology) | | NCDs II, obesity, diabetes | | | | | | | | | |
| | Hall 1 &2 | Hall 3,pharma lab | Odd/Hall 1 | Even /Hall 2 | | | | | | | | |
| | Dr Haseeba<br>Dr Arsheen | Dr Uzma<br>Dr Zaheer | Dr. Khola | Dr. Affifa | | | | | | | | |
| Tuesday 6.6.23 | Pathology (SGD) | | Pharmacology (LGIS) | | | | | | | | | |
| | Parathyroid Disorders | | Drugs that Affect Bone Mineral Homeostasis | | | | | | | | | |
| | Hall 1&2 | Hall3&patho lab | Odd /Hall 1 | Even /Hall 2 | | | | | | | | |
| | Dr Tayyaba:<br>Dr Rabiya Khalid | Dr Aasia<br>Dr Fatima | Dr Asma | Dr. Sobia | | | | | | | | |
| Wednesday 7.6.23 | Pathology (SGD) | | Surgery (LGIS) | | | | | | | | | |
| | Parathyroid Adenoma/carcinoma | | Surgical Intervention of Parathyroid Gland | | | | | | | | | |
| | Hall 1&2 | Hall3&patho lab | Odd/hall 1 | Even/hall2 | | | | | | | | |
| | Dr Tayyaba<br>Dr Rabiya Khalid | Dr Aasia<br>Dr Fatima | Dr Zafar Iqbal<br>DHQ | Dr. Muhammad Iqbal<br>SUI BBH | | | | | | | | |
| Thursday 8.6.23 | Pathology (LGIS) | | Pharmacology (LGIS) | | | | | | | | | |
| | Diabates Mellitus | | Anti-Diabetic drugs (Classification) | | | | | | | | | |
| | Odd/Hall 1 | Even/Hall 2 | Odd/Hall 1 | Even/Hall 2 | | | | | | | | |
| | Prof Mobeena | Prof Wafa | Dr Asma | Dr. sobia | | | | | | | | |
| Friday 9.6.23 | 08:00AM – 09:45AM | | 09:45AM – 10:30 | | | 10:30AM – 11:15AM | | 11:15AM – 12:00PM | | | | |
| | SGD / Skill lab | | Pharmacology (LGIS) | | | Medicine (LGIS) | | Pediatrics (LGIS) | | | | |
| | Community Medicine / Pathology<br>Health programs / Chronic Pancreatitis, Pancreatic Carcinoma | | Anti-Diabetic Drugs (Parenteral) | | | Diabetes and Hypoglycemia I | | Diabetes Mellitus/DKA I | | | | |
| | Batch A-H | I-P | Even /hall 5 | Odd /hall 4 | | Even/hall 5 | Odd /hall 4 | Even/hall 5 | Odd /hall 4 | | | |
| | Dr Imrana, Dr Zaira,Dr Ayesha | Dr Lehrasib | Dr Asma | Dr. Sobia | | Dr. Mujeeb HFH | Dr Sara Mustfa MUI BBH | Dr Hina Sattar | Dr. Khalid Saheel | | | |
| Saturday 10.6.23 SEMINAR DAY | 08:00AM – 09:45AM | | 09:45AM – 10:30 | | | 10:30AM – 11:15AM | | 11:45AM – 12:30PM | | 12:30PM – 01:15PM | | 01:15PM – 02:00PM |
| | SGD / Skill lab | | Pharmacology (LGIS)<br>Oral Hypoglycemics | | | Gynae/OBS (LGIS )<br>Diabetes in Pregnancy | | Medicine(LGIS) | | Pediatrics (LGIS) | | Eye (LGIS) |
| | Community Medicine / Pathology<br>Health programs / Chronic Pancreatitis, Pancreatic Carcinoma | | | | BREAK 11:15 AM – 11:45 AM/hall 5 | | | Diabetes and Hypoglycemia II | | Diabetes Mellitus/DKA II | | Complication of EYE in Diabetes Mellitus |
| | A-H | I-P | Even /hall 5 | Odd /hall 4 | | Odd /Hall 4 | Even/Hall 5 | Odd /Hall 4 | Even /Hall 5 | Even/hall 5 | Odd /hall 4 | Even/hall 5 | Odd /hall 4 |
| | Dr Imrana, Dr Zaira,Dr Ayesha | Dr Lehrasib | Dr Asma | Dr. Sobia | | Dr. Hina Gull | ;Dr Asma Khan | Dr Sara Mustfa Mui Bbh | Dr Mujeeb Hfh | Dr Hina Sattar | Dr. Khalid Saheel | Dr Maria | Dr Sulman |

# Tentative Time Table 4th YEAR MBBS-Endocrinology Module 2023 (3rd WEEK)

| DATE / DAY | 8:00 AM – 9:00 AM | | 09:00am – 10:00am | | BREAK 10:00AM – 10:30AM | 10:30am – 12:00pm | 12:00pm - 02:00pm |
|---|---|---|---|---|---|---|---|
| Monday 12.6.23 | Community Medicine (LGIS) | | Pharmacology (CBL) | | | CLINICAL CLERKSHIP of community medicine attached as annexures at the end of document<br>Community oriented clerkship and other rotations will remain same. These will be completed at end of yr. | |
| | Adolescent health | | Drugs used in Diabetes (Clinical Pharmacology) | | | | |
| | Even/Hall 2 | Odd/Hall 1 | Hall 1&2 | Hall 3&CPC Hall | | | |
| | Dr Abdul Qudoos | Dr Narjis Zaidi | Dr. Rubina<br>Dr Zoefeshan | Dr. Arsheen<br>Dr Zaheer | | | |
| Tuesday 13.6.23 | Pathology (SGD) | | Surgery (LGIS) | | | | |
| | Pancreatic tumors | | Surgical intervention of Pancreatic Tumors | | | | |
| | Hall 1& 2 | Hall 3&patho lab | Even/Hall 2 | Odd/Hall 1 | | | |
| | Dr Tayyaba<br>Dr Rabiya Khalid | Dr Aasia<br>Dr Fatima | Dr Zafar Iqbal | Dr Umar Qaiser | | | |
| Wednesday 14.6.23 | Pathology (CBL) Hall 1,2,3,patho lab | | Pathology (LGIS) Hall 1&2 | | | | |
| | Complications Of Diabetes Mellitus | | Adrenal Gland/Hyperadrenalism | | | | |
| | Dr Unaiza<br>Dr Fariha | Dr Aiysha, Dr Iqbal | Dr Rabiya Khalid | Dr.Fatima Tu Zahra | | | |
| Thursday 15.6.23 | Medicine (LGIS) | | Surgery (LGIS) | | | | |
| | Hyperaldosteronism | | Surgical Intervention Of Adrenal Gland | | | | |
| | Even/Hall 2 | Odd/Hall 1 | Even/Hall 2 | Odd/Hall 1 | | | |
| | Dr Sara Mustafa | Dr Mujeeb | Dr kiran butt<br>HFH SU I | Dr Waqas SUN I HFH | | | |

| | 08:00am – 09:45am | | 09:45am – 10:30 | | 10:30AM – 11:15AM | | 11:15AM – 12:00PM | |
|---|---|---|---|---|---|---|---|---|
| Friday 16.6.23 | PAL / skill lab | | Medicine (LGIS) | | Pathology (LGIS) | | Pharmacology(LGIS) | |
| | Community medicine / Pharmacology<br>IUGRC Session / P-Drug & Prescription writing | | Cushing's Syndrome And Addisson Disease | | Hypoadrenalism and adrenal tumors | | Corticosteroids (Classification) | |
| | Batch A-H | I-P | Even/Hall 5 | Odd/Hall 4 | Even/hall 5 | Odd/hall 4 | Even/hall 5 | Odd/hall 4 |
| | All Demonstrators<br>,C Med Dept | Dr Uzma, Dr Hasseba | Dr Mujeeb HFH | Dr Sara Mustafa BBH | Dr. Rabbia Khalid | Dr. Fatima Tu Zahra | Dr Zunera | Dr Attiya |

| | 08:00AM – 09:45AM | | 09:45AM – 10:30 | | 10:30AM – 11:15AM | | BREAK 11:15AM – 11:45AM | 11:45AM – 12:30PM | | 12:30PM – 01:15PM | | 01:15PM – 02:00PM | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Saturday 17.6.23 | PAL/skill lab<br>COMMUNITY MEDICINE / Pharmacology | | Pharmacology (LGIS) /hall 1&2 | | Pharmacology (CBL) hall 3,4&5,6 | | | Surgery (LGIS) /hall 4&5 | | Pathology (CBL) Hall 3,4& 5,patho lab | | Pharmacology (SGD) Hall 3,4&5,6 | |
| | IUGRC Session/ P-Drug & Prescription Writing | | Corticosteroids (Mechanism Of Action & Adverse Effects) | | Corticosteroids (Clinical Pharmacology) | | | Neuroendocrine Disorders | | Pineal Gland Pathologies | | Glucocorticoids Antagonist | |
| | All Demonstrators<br>C Med Dept | Dr Uzma, Dr Hasseba | Dr Zunera | Dr. Attiya | Dr. Zaheer<br>Dr. Zoefeshan | Dr. Arsheen<br>Dr Rubina | | Dr. Rahatul Hassan BBH | Dr. Nazan Hassan BBH | Dr Fatima Rizvi,<br>Dr Nida | Dr Abid<br>Dr Lahraib | Dr. Uzma<br>Dr. Zoefeshan | Dr. Haseeba<br>Dr Rubina |

Tentative Time Table 4th YEAR MBBS-Endocrinology Module 2023 (4rth WEEK)

| DATE / DAY | 8:00 AM – 9:00 AM | | 09:00am – 10:00am | | BREAK 10:00AM – 10:30AM | 10:30am – 12:00pm | 12:00pm - 02:00pm |
|---|---|---|---|---|---|---|---|
| Monday 19.6.23 | Pathology (SGD) | | Community Medicine (LGIS) | | | CLINICAL CLERKSHIP of community medicine attached as annexures at the end of document<br>Community oriented clerkship and other rotations will remain same. These will be completed at end of yr. | |
| | Disorders of Adrenal medulla & MEN Syndrome | | Health system I | | | | |
| | Hall 1& 2 | Hall 3&hall 6 | Even/Hall 2 | Odd/Hall 1 | | | |
| | Dr amina noor<br>Dr sara raffi | Dr mahreen, Dr Fatima rizvi | Dr Imran younis | Dr. Gul Mehar | | | |
| Tuesday 20.6.23 | Family Medicine (LGIS) | | Community Medicine (LGIS) | | | | |
| | Care concepts of FM in NCDs (diabetes, Obesity) | | Health system II | | | | |
| | CPC Hall. Combined Class | | Even/Hall 2 | Odd/ Hall 1 | | | |
| | Dr Saadia HOD(family medicine dept.) | | Dr Imran younis | Dr Asif | | | |
| Wednesday 21.6.23 | SDL ( Revision of Important topics) | | | | | | |
| Thursday 22.6.23 | Written exam | | | | | | |
| Friday& Saturday 23&24.6.23 | Viva voce | | | | | | |
| | | | | | | | |

NOTE; Venue for CBL & SGDs is subject to availably of lecture halls. Sometimes due to over lapping of activities, change of venue will be notified.

# Community Oriented Clerkship Module (annex I)

COCM

## Theme (AIM):

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

LEARNING OUTCOMES (LOS):

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

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

MODULE OUTLINE:

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

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

SOPS OF LEARNING & ASSESSMENTS:

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

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

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4th day | Follow up session on HM- DTD work & HHS | Briefing / guidelines on FV Hospital waste disposal system in hospitals | • FV to the hospital waste disposal system & relevant sites / Incinerator | Health awareness work (HAW) | • FP Center HFH OPD, hospital shelters sites for HAW | • End of module OSPE<br>• Grade of performance in visits to sites | • Explain hospital waste disposal system<br>• Develop a hospital waste management plan<br>• Explains various domains of hospital management (C2) |
| 5th day week 2) | SGIS / PPT based briefing on Hospital management & administration | Visit to Hospital management & administration (HFH) office | | Health awareness work (HAW | HHF | • End of module OSPE<br>• Grade of performance in visits to sites | |
| 6th day | SGIS / PPT based briefing on visit to First level of health care facility (FLCF) BHU/RHC | Field visit to RHC Khayaban Sir-Syed (RHC) or BHU | | • Demo room / lec Hall 3 NTB / CPC-Hall.<br>• RHC / BHU | Health awareness work (HAW at site visited | • End of module OSPE<br>• Report credit in PJ | • Explain working of FLCF<br>• Appreciate PHC elements at FLCF. (C2) |
| 7th day | Health days commemoration (walk/ seminar/ presentation/ CHC-message dissemination work (10.30 – 12.00pm) | | 12.00 – 2.00pm<br>• Completion & assessment of relevant Practical Journal work,<br>• HHS-report book,<br>• Logbook etc.<br>• Feedback discussion on PHI | | | • Communication skills<br>• Comprehend frequency Preventable RFs of NCDs in the real population (RF surveillance)<br>• Undertake a preventive Healthcare inquiry | |

# CLINICAL TRAINING ROTATIONS 4TH YEAR MBBS CLASS (SESSION 2019-2020)

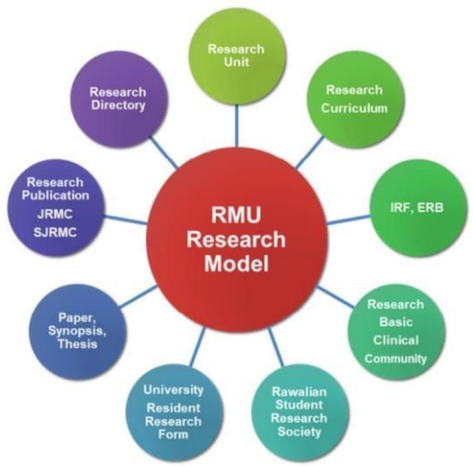
## STARTING w.e.f 06-03-2023 ENDING 03-12-2023.

| Date | Medicine /Neurology DHQ | OBS/GYN HFH I & II | OBS/GYN BBH & DHQ | C.MED | E.N.T. H.F.H. | E.N.T. B.B.H | E.N.T. D.H.Q | Medicine DHQ | EYE H.F.H | EYE B.B.H. | EYE DHQ | PEADS H.F.H | PEADS B.B.H. | CARDIO | PATH | NEUROS URGERY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 06-03-2023 To 19-03-2023 | A | B1, HFH-1 B2, HFH-2 | C1, BBH C2, DHQ | D | E | F | G | H | I | J | K | L | M | N | O | P |
| 20-03-2023 To 02-04-2023 | B | C1, HFH-1 C2, HFH-2 | D1, BBH D2, DHQ | E | F | G | H | I | J | K | L | N | | O | P | A |
| 03-04-2023 To 16-04-2023 | C | D1, HFH-1 D2, HFH-2 | E1, BBH E2, DHQ | F | G | H | I | J | K | L | M | | O | P | A | B |
| 17-04-2023 To 07-05-2023 Spring V. | D | E1, HFH-1 E2, HFH-2 | F1, BBH F2, DHQ | G | H | I | J | K | L | M | N | P | | A | B | C |
| 08-05-2023 To 28-05-2023 Sport W. | E | F1, HFH-1 F2, HFH-2 | G1, BBH G2, DHQ | H | I | J | K | L | M | N | O | | A | B | C | D |
| 29-05-2023 To 11-06-2023 | F | G1, HFH-1 G2, HFH-2 | H1, BBH H2, DHQ | I | J | K | L | M | N | O | P | B | | C | D | E |
| 12-06-2023 To 31-07-2023 Summer V. | G | H1, HFH-1 H2, HFH-2 | I1, BBH I2, DHQ | J | K | L | M | N | O | P | A | | C | D | E | F |
| 01-08-2023 To 13-08-2023 | H | I1, HFH-1 I2, HFH-2 | J1, BBH J2, DHQ | K | L | M | N | O | P | A | B | D | | E | F | G |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14-08-2023 To 27-08-2023 | I | J1, HFH-1 J2, HFH-2 | K1, BBH K2, DHQ | L | M | N | O | P | A | B | C | | E | F | G | H |
| 28-08-2023 To 10-09-2023 | J | K1, HFH-1 K2, HFH-2 | L1, BBH L2, DHQ | M | N | O | P | A | B | C | D | F | | G | H | I |
| 11-09-2023 To 24-09-2023 | K | L1, HFH-1 L2, HFH-2 | M1, BBH M2, DHQ | N | O | P | A | B | C | D | E | | G | H | I | J |
| 25-09-2023 To 08-10-2023 | L | M1, HFH-1 M2, HFH-2 | N1, BBH N2, DHQ | O | P | A | B | C | D | E | F | H | | I | G | K |
| 09-10-2023 To 22-10-2023 | M | N1, HFH-1 N2, HFH-2 | O1, BBH O2, DHQ | P | A | B | C | D | E | F | G | | I | J | K | L |
| 23-10-2023 To 05-11-2023 | N | O1, HFH-1 O2, HFH-2 | P1, BBH P2, DHQ | A | B | C | D | E | F | G | H | J | | K | L | M |
| 06-11-2023 To 19-11-2023 | O | P1, HFH-1 P2, HFH-2 | A1, BBH A2, DHQ | B | C | D | E | F | G | H | I | | K | L | M | N |
| 20-11-2023 To 03-12-2023 | P | A1, HFH-1 A2, HFH-2 | B1, BBH B2, DHQ | C | D | E | F | G | H | I | J | L | | M | N | O |
| Date | Medicine /Neurology DHQ | OBS/GYN HFH I & II | OBS/GYN BBH & DHQ | C.MED | E.N.T. H.F.H. | E.N.T. B.B.H. | E.N.T. D.H.Q | Medicine D.H.Q | EYE H.F.H | EYE B.B.H. | EYE DHQ | PEADS H.F.H | PEADS B.B.H. | CARDIO | PATH | NEUROS URGER Y |

# 12- Research

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




# 13- Biomedical Ethics

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

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

1. Principle of respect for autonomy,
2. Principle of no maleficence, 3. Principle of beneficence, and 4. Principle of justice.

## 14- Family Medicine

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

## 15- Artificial Intelligence

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