### **DEPARTMENT OF MEDICAL EDUCATION**



# STUDY GUIDE ENDOCRINE & REPRODUCTION-II

**4<sup>TH</sup> YEAR MBBS** 

BLOCK: L CLASS OF **2023** DURATION: 8 WEEKS

**STUDENT NAME** 

#### DISCLAIMER

- Developing a study guide is a dynamic process and undergoes iteration according to the needs and priorities.
- This study guide is subjected to the change and modification over the whole academic year.
  - However, students are advised to use it as a guide for respective modules.
  - It is to declare that the learning objectives (general and specific) and the distribution of

assessment tools (both theory and practical) are obtained from Khyber Medical University,

Peshawar. These can be obtained from:

https://kmu.edu.pk/examination/guidelines

• The time tables are for guiding purpose. It is to advise that final timetables are always

displayed over the notice boards of each lecture hall.

Students are encouraged to provide feedback via coordinator.

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1 Module Committee:					
s.no	Name	Department	Role		
1.	Prof. Dr. Umar Farooq	CE	O & Dean		
2.	Prof. Dr. Irfan U. Khatta	ik Dir	Director DME		
	·				
Module Team					
3.	Dr. Zeeshan Haroon	Community Medicine	Block Coordinator (Developer)		
4.	Dr. Adnan Rashid	Community Medicine	Module Coordinator (Developer)		
5.	Dr. Zainab Nazneen	Community Medicine	Developer		
6.	Dr. Umair	Community Medicine	Co-developer		
7.	Dr. Basharat	Pathology	Co-developer		
8.	Dr. Afsheen Siddiqi	Pharmacology	Co-developer		
9.	Dr. Salma Shazia	Forensic Medicine	Co-developer		
10.	Dr. Tauqeer Ahmed	Medicine	Co-developer		
11.	DR. Saadia Irum	Gynaecology	Co-developer		
12.	Dr Ghazala	Surgery	Co-developer		
13.	Dr. Ali Raza	Paediatrics	Co-developer		
14.	Dr. Baynazir Khan	Neurosurgery	Co-developer		

#### 2 What Is A Study Guide?

It is an aid to Inform students how student learning program of the module has been organized, to help students organize and manage their studies throughout the module and guide students on assessment methods, rules and regulations.

#### 2.1 The study guide:

Communicates information on organization and management of the module. This will help the student to contact the right person in case of any difficulty. Defines the objectives which are expected to be achieved at the end of the module. Identifies the learning strategies such as lectures, small group teachings.

#### 2.2 Module objectives.

Provides a list of learning resources such as books, computer-assisted learning programs, weblinks, and journals, for students to consult in order to maximize their learning. Highlights information on the contribution of continuous on the student's overall performance. Includes information on the assessment methods that will be held to determine every student's performance.

#### 2.3 Achievement of objectives.

Focuses on information pertaining to examination policy, rules and regulations.

#### 2.4 CURRICULUM FRAMEWORK:

#### STUDENTS WILL EXPERIENCE INTEGRATED CURRICULUM.





## 3 Recommended List Of Icons



4

## 4 Table Of Specification

S. No	Theme	Topics / region	Weightage
		covered	No. of hours(%age)
1	Tall/short stature	Pituitary gland	20(17.24%)
2	Neck swelling and Muscle cramps	Thyroid and	13(11.20%)
		parathyroid glands	
3	Excessive thirst and urination	Endocrine pancreas	15(12.93%)
4	Moon face	Adrenal cortex	22(18.96%)
5	Infertility and pregnancy	Female sexual	47(40.51%)
		organs	
6	Breast lump	Breasts	09(7.75%)
Total			116(100%)



#### Number of MCQs from each discipline in the module

### 5 Organization of Module

#### 5.1 Introduction:

#### **Endocrine System:**

The endocrine system is made up of glands that make hormones which regulate all the biological processes in the body from conception through adulthood and into old age. The function of the endocrine system is to coordinate and integrate cellular activity within the whole body by regulating cellular and organ function throughout life and maintaining homeostasis.

#### **Reproductive system:**

Reproductive health (RH) is a state of complete physical, mental and social well-being in all matters relating to the reproductive system. Reproductive Health is essential for peoples' overall well being. Hence Reproductive health and specifically women's reproductive health is given prime importance at a global level.

#### 5.2 Rationale:

The endocrine system is responsible for many amazing processes: growth, sexual development, the fight or flight response to danger, and maintaining cellular energy and blood sugar levels. Its work is complicated, but these activities will help the medical students understand how the endocrine system gets the job done and how the defects in hormone production and/or action can lead to profound clinical conditions and syndromes.

In this module, topics related to endocrine and reproduction will be taught to the students in an integrated fashion with reference to common diseases occurring in our community alongwith their prevention.

Regarding reproductive system, this module will address common Maternal and child health issues including safe motherhood, contraception, abortion, Infant health care, Sexually Transmitted Diseases and HIV/AIDS, infertility. It will also address the RH related issues of men.



#### 6 GENERAL LEARNING OUTCOMES

By the end of this module the students of 4<sup>th</sup> year MBBS would be able to;

#### 6.1 Knowledge

Theme 1:

- Describe the pathology, clinical features, investigations and treatment of Hyper and hypopituitarism
- Describe the pathology, clinical features, investigations and treatment of Hyper and hypothyroidism
- Describe the pathology, clinical features, investigations and treatment of hyper and hypoparathyroidism
- Classify the risk factors and describe the pathogenesis, clinical features, investigations and treatment of Diabetes mellitus
- Explain the pathology, clinical features, investigations and treatment of Hyper and hypoadrenalism
- Discuss the causes of male and female infertility and its management
- Describe the classification, pathology and management of testicular tumors
- Explain benign and malignant breast disease
- Discuss the etiology, risk factors, clinical features, investigations and treatment of carcinoma of breast
- Discuss the role of natural and synthetic hormones and antagonists in the management of relevant disease conditions
- Explain the laws related to sexual offenses, and management of a rape victim in forensic aspects
- Describe the pathophysiology and surgical management of benign prostatic hyperplasia and carcinoma of the prostate

#### 6.2 Skills

- Write and formulate prescriptions for Graves' disease and Diabetes mellitus patients
- Check glucose in urine, sample of blood and interpret pap smear slide
- Identify the microscopic features of multinodular goiter, uterine fibroids and breast carcinoma
- Examining a rape victim on manikin, taking sample, sealing and preservation of the specimen

• Examining, taking sample, sealing and preservation of the specimen of a victim of sodomy

#### 6.3 Attitude

- Taking consent from a rape victim
- Ethics involved while examining, taking sample, sealing and preservation of the specimen of a rape victim and a victim of sodomy



## 7 SPECIFIC LEARNING OUTCOMES

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	Theme 1	Tall/short stature (1	8LGDs)	
	Subject	Learning Outcomes	MIT	No. of hours
1	Pathology (3LGDS) Physiological anatomy	<ul> <li>Explain the gross and microscopic structure of pituitary gland</li> <li>Explain the functions of hormones of the anterior and posterior pituitary gland and their regulation by the Hypothalamus</li> </ul>	Large group discussion (LGD)	1
2	<ul> <li>Hyperpituitarism/Pituita</li> <li>ry adenomas: <ul> <li>Prolactinomas</li> <li>Somatotrophic</li> <li>tumors</li> <li>Corticotrophic</li> <li>tumors</li> <li>others</li> </ul> </li> </ul>	<ul> <li>Explain the causes of hyperpituitarism</li> <li>Discuss the gross and microscopic structure of pituitary adenomas, and the hormones secreted from these</li> <li>Explain the clinical manifestations of different types of pituitary adenomas</li> </ul>	Large group discussion (LGD)	1
3	Hypopituitarism	<ul> <li>Describe the etiology and clinical manifestations of hypopituitarism</li> </ul>	Large group discussion (LGD)	1
1	Medicine (2LGDs) Acromegaly/Gigantism Hyperprolactinemia	<ul> <li>Explain the etiology, clinical features, investigations, treatment and complications of Acromegaly/gigantism</li> <li>Discuss the etiology, clinical features, investigations and treatment of hyperprolactinemia</li> </ul>	Large group discussion (LGD)	1
2	Hypopituitarism/Sheeha n`s syndrome	<ul> <li>Explain the etiology, clinical features, investigations and treatment of Hypopituitarism and Sheehan's syndrome</li> </ul>	Large group discussion (LGD)	1
Pharmacology (1LGD)				

1	Growth hormone Growth hormone antagonists (Octreotide and others) Bromocriptine Vasopressin/Desmopres sin	<ul> <li>Describe the sources of Growth hormone (old and new sources)</li> <li>Describe the mechanism of action, clinical uses and adverse effects of Growth hormone</li> <li>Enlist Growth hormone antagonists</li> <li>Describe the clinical role of Octreotide in acromegaly</li> <li>Describe the route of administration, dosage and adverse effects of octreotide in acromegaly and gigantism</li> <li>Describe the mechanism of action, clinical uses and adverse effects of Bromocriptine</li> <li>Describe the mechanism of action, clinical use and adverse effects of Desmopressin</li> <li>Enlist the drugs used in nephrogenic diabetes insipidus</li> </ul>	Large group discussion (LGD)	1
1	Short stature	<ul> <li>Describe the method to measure and plot height</li> <li>Calculate height velocity and midparental target height to allow early diagnosis of growth disorders in paediatric patients</li> <li>Explain the diagnostic criteria that allows to differentiate causes of growth deficiency.</li> <li>Discuss the toolbars for better communication with patients and families and coordination of multidisciplinary care.</li> <li>Discuss treatment of growth hormone deficiencyor other diseases responsible for short stature and their appropriate management.</li> </ul>	Large group discussion (LGD)	1
	Neurosurgery(1LGD)	Enumerate and describe the		
1	Surgical management of pituitary adenoma.	surgical treatments and complications of pituitary macro/microadenomas.	Large group discussion (LGD)	1

		1	1
Community Medicine (9LGDs)         1       Occupational Health: Introduction	<ul> <li>Define Occupational health.</li> <li>Discuss importance of occupational health.</li> <li>Describe ergonomics.</li> <li>Describe principles and responsibilities of occupational health officer[OHO].</li> </ul>	Large group discussion (LGD)	1
2 Physical Hazards	<ul> <li>Enumerate physical hazards (heat, cold, noise, light, vibrations, pressure effect, radiations).</li> <li>Discuss its ill effects on health.</li> <li>Discuss its preventive measures.</li> </ul>	Large group discussion (LGD)	1
3 Chemical Hazards	<ul> <li>Enumerate chemical hazards (inorganic dust diseases, organic dust diseases, metals and chemicals).</li> <li>Discuss its ill effects on health.</li> <li>Discuss its preventive measures.</li> </ul>	Large group discussion (LGD)	1
4 Mechanical, Biological & Psychosomatic hazards	<ul> <li>Describe mechanical hazards.</li> <li>Discuss control measures of mechanical hazards.</li> <li>Discuss control measures of mechanical hazards.</li> <li>Discuss control measures of biological hazards.</li> <li>Describe psychosomatic stressors.</li> <li>Discuss control measures of psychosomatic stressors.</li> </ul>	Large group discussion (LGD)	1
5 Animal hazards	<ul> <li>Describe types, prevalence and statistics of snake bite.</li> <li>Discuss causes of poor management with respect to awareness and vaccination.</li> </ul>	Large group discussion (LGD)	1
6 Preventive measures, health insurance, social security schemes	<ul> <li>Describe various preventive measures of occupational hazards (Medical engineering and legal measure).</li> <li>Discuss role and benefits of health insurance.</li> <li>Discuss social security and its benefits.</li> </ul>	Large group discussion (LGD)	1
7 Demography: Introduction	• Define demography and various related terms.		1

		<ul> <li>Explain and interpret population pyramid.</li> <li>Explain demographic transition.</li> <li>Describe the causes of high and low fertility and mortality.</li> </ul>	Large group discussion (LGD)	
8	Growth rate	<ul> <li>Define population growth rate, CDR, CBR.</li> <li>Describe growth rate .</li> <li>Describe population explosion &amp; its implications.</li> </ul>	Large group discussion (LGD)	1
9	Demographic indicators	<ul> <li>Explain advantages of population control.</li> <li>Describe the demographic indicators of Pakistan.</li> </ul>	Large group discussion (LGD)	1
Μ	edical Education (1LGD)	<ul> <li>Serve the patient as an individual, taking into account</li> </ul>	Large group	1
1	Dealing with patients Community Need analysis	<ul><li>lifestyle, beliefs and support system.</li><li>Identify the health care needs of community.</li></ul>	discussion (LGD)	

	Theme 2	Neck swelling and muscle cra	amps (14LGDs)	
	Subject	Learning Outcomes	MIT	No. of
1	Physiology (1LGD) Physiological anatomy of the Thyroid gland	<ul> <li>Explain the gross and microscopic structure of Thyroid gland gland</li> <li>Explain the synthesis and functions of hormones of the thyroid gland and their regulation by the anterior pituitary</li> </ul>	Large group discussion (LGD)	1
1	Pathology (4LGDs) Hyperthyroidism including Grave`s disease	<ul> <li>Discuss the etiology, pathogenesis and morphology of Hyperthyroidism and Grave's disease</li> </ul>	Large group discussion (LGD)	1
2	Hypothyroidism	<ul> <li>Discuss the etiology, pathogenesis, morphology and clinical features of Hypothyroidism</li> </ul>	Large group discussion (LGD)	1

3	Thyroiditis Multinodular goiter	•	Discuss the classification, morphology and presentations of Thyroiditis Explain the etiology, clinical features, and complications of multinodular goitre	Large group discussion (LGD)	1
4	Thyroid malignancies	•	Classify thyroid malignant disorders Explain morphology, clinical features and prognosis of thyroid malignancies	Large group discussion (LGD)	1
	Medicine (5LGDs)	•	Discuss the etiology, clinical		
1	Hyperthyroidism including Grave`s disease	•	features, investigations and treatment and prognosis of Hyperthyroidism and Grave's disease Explain the pathogenesis, clinical features and management of Grave's Ophthalmopathy	Large group discussion (LGD)	1
2	Hypothyroidism	•	Discuss the types, etiology, clinical features, investigations and treatment of Hypoparathyroidism	Large group discussion (LGD)	1
3	Thyroiditis	•	Describe the classification, etiology, clinical features, investigations and treatment of Thyroiditis	Large group discussion (LGD)	1
4	Multinodular goiter Thyroid malignancies	•	Discuss the etiology, clinical features, investigations and management approach to a patient with multinodular goiter Classify thyroid malignant disorders Discuss the pathogenesis, clinical features, investigations and management of Thyroid malignancies	Large group discussion (LGD)	1
5	Hyperparathyroidism Hypoparathyroidism	•	Discuss the types, etiology, clinical features, investigations and treatment of Hyperparathyroidism Discuss the types, etiology, clinical features, investigations and treatment of Hypoparathyroidism	Large group discussion (LGD)	1
	Pharmacology (2LGDs)	•	Enlist thyroid preparations (used		
1	Thyroid hormones	•	ones) Describe the mechanism of action, pharmacological effects, clinical use	discussion (LGD)	1

		and adverse effects of Thyroxine (T <sub>4</sub> ) and Tri-iodothyronine (T <sub>3</sub> )	
2	Antithyroid drugs	<ul> <li>Classify Antithyroid drugs</li> <li>Describe the mechanism of action, clinical use and adverse effects of Thioamides</li> <li>Describe the mechanism of action, clinical use and adverse effects of Potassium iodide</li> <li>Describe Lugol's iodine solution</li> <li>Describe the mechanism of action, clinical use and adverse effects of Radioactive iodine (<sup>131</sup>I)</li> <li>Describe the use of β-blockers in hyperthyroid patients</li> </ul>	1
1	Pediatrics (1LGD) Congenital hypothyroidism	<ul> <li>Discuss the types and clinical features of hypothyroidism</li> <li>Discuss investigations and discussion treatment of Hypothyroidism</li> <li>(LGD)</li> </ul>	1
1	Community Medicine (1LGD) Iodine deficiency / Goitre	<ul> <li>Discuss sources of iodine and goitrogens</li> <li>Discuss iodine deficiency disorders and daily requirement of Iodine</li> <li>Discuss iodine deficiency disorders (LGD) and daily requirement of Iodine</li> </ul>	1

	Theme 3	Excessive thirst and urination	on (13LGDs)	
	Subject	Learning Outcomes	MIT	No. of
1	Pathology (2 LGDs)Diabetes Mellitus• Classification• Diagnosis• Insulin resistance• Beta celldysfunction	<ul> <li>Classify Diabetes mellitus</li> <li>Explain the diagnostic criteria of DM</li> <li>Explain the mechanisms of insulin resistance</li> <li>Explain the mechanisms of beta cell dysfunction</li> <li>Explain the acute and chronic</li> </ul>	Large group discussion (LGD)	hours 1
	<ul> <li>Complications</li> <li>Acute</li> <li>Chronic</li> </ul>	complications of DM		

2	Pancreatic neuroendocrine tumors	<ul> <li>Describe the types and clinical presentations of pancreatic neuroendocrine tumors</li> </ul>	Large group discussion (LGD)	1
1	Medicine (6 LGDs) Diabetes mellitus Types Insulin resistance syndromes	<ul> <li>Explain the different types of DM</li> <li>Discuss the mechanism presentation, and management of insulin resistance</li> <li>Discuss the clinical features of DM</li> <li>Explain the diagnostic workup of a</li> </ul>	Large group	3
	<ul> <li>Clinical features investigations</li> <li>Treatment</li> <li>Complications</li> </ul>	<ul> <li>patient with DM</li> <li>Classify the pharmacological treatment of DM</li> <li>Explain life style modifications in the management of DM</li> <li>Discuss the acute and chronic complications of DM</li> </ul>	(LGD)	
2	Hypoglycemic coma	<ul> <li>Explain the etiology, clinical features and management of hypoglycemic coma</li> </ul>	Large group discussion (LGD)	1
3	Diabetic ketoacidosis Hyperosmolar non- ketotic diabetic coma Lactic acidosis	<ul> <li>Explain the precipitating factors, diagnostic work up, and treatment of a patient with diabetic ketoacidosis</li> <li>Explain the precipitating factors, diagnostic work up, and treatment of a patient with Hyperosmolar non- ketotic diabetic coma</li> <li>Explain the precipitating factors, diagnostic work up, and treatment of a patient with Lactors,</li> </ul>	Large group discussion (LGD)	1
4	Posterior pituitary gland SIADH	<ul> <li>Discuss the functions of hormone Vasopressin secreted by the posterior pituitary gland</li> <li>Explain the etiology, clinical features, investigations and treatment of Diabetes insipidus</li> <li>Explain the etiology, and pathogenesis of SIADH secretion</li> </ul>	Large group discussion (LGD)	1
1	Pharmacology (3 LGDs)	<ul> <li>Classify Insulins</li> <li>Describe the sources of Insulin</li> <li>Describe the differences between the human, boving and porcing</li> </ul>		1
	Glucagon	Insulins		T

		<ul> <li>Describe the mechanism of action and clinical uses of Insulin</li> <li>Describe the com)lications of Insulin therapy</li> <li>Describe the management of hypoglycemia caused by Insulin</li> <li>Describe the management of diabetic ketoacidosis</li> <li>Describe the mechanism of action and clinical use of Glucagon</li> </ul>	Large group discussion (LGD)	
2	Oral hypoglycemic drugs	<ul> <li>Classify oral hypoglycemic drugs</li> <li>Enlist euglycaemic drugs</li> <li>Describe the mechanism of action and adverse effects of Sulphonylureas</li> <li>Describe the mechanism of action and clinical use of Meglitinides</li> <li>Describe the mechanism of action, clinical use and adverse effects of Biguanides</li> <li>Describe the mechanism of action, clinical use and adverse effects of Thiazolidinediones</li> <li>Describe the mechanism of action, clinical use and adverse effects of Thiazolidinediones</li> <li>Describe the mechanism of action, clinical use and adverse effects of α- glucosidase inhibitors</li> <li>Describe the mechanism of action and clinical use of Pramlintide,</li> </ul>	Large group discussion (LGD)	2
	Pediatrics (1 LGD)	<ul> <li>Exenatide and Sitagliptin</li> <li>Enumerate the blood glucose</li> <li>parameters and the clinical signs</li> </ul>		
1	Management of Type 1 Diabetes mellitus in children	<ul> <li>for an early diagnosis of diabetes in a child.</li> <li>Recognize how diabetes may present in young children or babies, in order to make the diagnosis and prevent coma or death</li> <li>Plan investigations and management plan for a newly diagnosed and a known diabetic child.</li> <li>Enumerate the different types of insulins.</li> </ul>	Large group discussion (LGD)	1
Com	nmunity Medicine(1 LGD)	<ul> <li>Discuss Prevalence of diabetes mellitus globally and in Pakistan</li> </ul>		

1	Non-communicable diseases: Prevention of diabetes mellitus	<ul> <li>Discuss modifiable and non- modifiable risk factors for diabetes mellitus</li> <li>Describe epidemiological determinants of diabetes mellitus</li> <li>Discuss screening methods for</li> </ul>	Large group discussion (LGD)	1
		<ul> <li>Discuss screening methods for diabetes mellitus</li> </ul>		
		<ul> <li>Discuss the prevention (Primary.</li> </ul>		
		secondary and tertiary) and care of		
		diabetes mellitus		

	Theme 4	Moon Face (19LGDs)	
	Subject	Learning Outcomes MIT	No. of hours
1	Physiology (1LGD) Physiology of the Adrenal cortical hormones	<ul> <li>Explain the gross and microscopic structure of Adrenal gland</li> <li>Explain the synthesis and functions of hormones of the adrenal cortex and their regulation by the anterior pituitary</li> </ul>	1
1	Pathology (5LGDs)	Discuss the etiology of     Large group     discussion	1
1	Cushing's syndrome	Explain the etiology and clinical (LGD) features, of Cushing's syndrome	
2	Hyperaldosteronism Adrenogenital syndrome	<ul> <li>Explain the etiology, and presentation of primary Hyperaldosteronism</li> <li>Explain the etiology, clinical features, of Adrenogenital syndrome</li> <li>Large group discussion</li> <li>(LGD)</li> </ul>	1
3	Adrenal insufficiency • Primary (Acute and Chronic) • Secondary	<ul> <li>Classify adrenal insufficiency in the context of its etiology</li> <li>Discuss the clinical presentations and complications of adrenal insufficiency</li> <li>Large group discussion (LGD)</li> </ul>	1
4	Adrenal neoplasms	<ul> <li>Discuss the types of adrenal neoplasms</li> <li>Explain the morphology, and clinical features of adrenal neoplasms</li> <li>Large group discussion (LGD)</li> </ul>	1

5	Pheochromocytoma Multiple Endocrine Neoplasia syndromes (MEN)	<ul> <li>Explain the morphology, and clinical features of Pheochromocytoma</li> <li>Classify Multiple endocrine neoplasia syndrome</li> <li>Explain the morphology and clinical features of MEN</li> </ul>	Large group discussion (LGD)	1
1	Hypercortisolism and Cushing`s syndrome	<ul> <li>Explain the etiology, clinical features, diagnostic workup and management of Hypercortisolism/Cushing`s syndrome</li> </ul>	Large group discussion (LGD)	1
2	Primary Hyperaldosteronism	<ul> <li>Explain the etiology, clinical features, diagnostic workup and management of Primary Hyperaldosteronism</li> </ul>	Large group discussion (LGD)	1
3	Adrenogenital syndrome	<ul> <li>Explain the etiology, clinical features, diagnostic workup and management of Adrenogenital syndrome</li> </ul>	Large group discussion (LGD)	1
4	Adrenal insufficiency <ul> <li>Primary (Acute and Chronic)</li> <li>Secondary</li> </ul>	<ul> <li>Classify adrenal insufficiency</li> <li>Explain the etiology, clinical features, investigations and treatment of primary Addison's disease</li> <li>Explain the etiology, clinical features, investigations and treatment of pituitary adrenal insufficiency</li> </ul>	Large group discussion (LGD)	1
5	Adrenal neoplasms	<ul> <li>Explain the types of adrenal tumors</li> <li>Discuss the clinical presentations, diagnostic workup and treatment of adrenal tumors</li> </ul>	Large group discussion (LGD)	1
6	Pheochromocytoma Gastro-entero- pancreatico- neoroendocine tumors (GEP-NETs) including Carcinoid tumors	<ul> <li>Explain the clinical features, investigations, management and complications of Pheochromocytoma</li> <li>Explain the clinical features, investigations, management of GEP-NETs/Carcinoid tumors</li> </ul>	Large group discussion (LGD)	1

Pharmacology (2LGDs)		<ul><li>Classify Glucocorticoids</li><li>Describe the mechanism of action,</li></ul>	Large group	
1	Glucocorticoids	<ul> <li>pharmacological effects, clinical uses and adverse effects of glucocorticoids</li> <li>Describe dexamethasone suppression test</li> </ul>	discussion (LGD)	2
2	Glucocorticoid antagonists/synthesis inhibitors Aldosterone antagonists	<ul> <li>Enlist Glucocorticoid antagonists/synthesis inhibitors</li> <li>Describe the mechanism of action, clinical uses and adverse effects of Mifepristone, Ketoconazole, Metyrapone and Aminoglutethimide</li> <li>Describe the mechanism of action, clinical uses and adverse effects of Spironolactone (apart from being used as diuretic)</li> </ul>	Large group discussion (LGD)	1
<b>Com</b>	munity Medicine (5LGDs) Introduction to nutrition, basic measurements & allowances Macronutrients	<ul> <li>Classify nutrients</li> <li>Discuss quality of nutrients in diet</li> <li>Discuss the balanced diet</li> <li>Discuss energy value of different nutrients</li> <li>Describe classification of macronutrients</li> <li>Discuss the functions and importance of various macronutrients</li> <li>Discuss daily allowance of macro nutrients</li> <li>Discuss the diseases caused by their deficiency and excess</li> </ul>	Large group discussion (LGD)	1
2	Micronutrients -Vitamin deficiencies allowances & control	<ul> <li>Describe classification of micronutrients</li> <li>Discuss the function and importance of various vitamins</li> <li>Discuss daily allowances of vitamins</li> <li>Discuss diseases caused by their deficiency</li> </ul>	Large group discussion (LGD)	1
3	Micronutrients -mineral deficiencies allowances and control	<ul> <li>Discuss the function and importance of various minerals essential for health</li> <li>Discuss daily allowance of</li> </ul>	Large group discussion (LGD)	1

		<ul><li>minerals intake</li><li>Discuss diseases caused by their deficiency</li></ul>		
4	Undernutrition – Protein calorie malnutrition and control	<ul> <li>Define undernutrition and its classification</li> <li>Discuss protein calorie malnutrition &amp; its causes</li> <li>Describe the various classifications for assessment of PEM</li> <li>Discuss control strategies of malnutrition</li> </ul>	Large group discussion (LGD)	1
5	Over-nutrition / obesity and it's control	<ul> <li>Define Obesity</li> <li>Calculate BMI</li> <li>Discuss epidemiology of Obesity</li> <li>Enumerate causes of Obesity</li> <li>Explain the complications of Obesity</li> <li>Formulate the management plan for Obesity</li> <li>Discuss prevention of Obesity</li> </ul>	Large group discussion (LGD)	1

Theme 5	Infertility and Pregnancy (43LGDs)
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Subject		Learning Outcomes	MIT	No. of
				hours
F	Pathology (10LGDs)	<ul> <li>Classify testicular tumors</li> </ul>		
1	Testicular tumors	<ul> <li>Explain the gross and microscopic morphology of benign and malignant testicular tumors</li> </ul>	Large group discussion (LGD)	1
		<ul> <li>Discuss the staging and prognosis of testicular malignant tumors</li> </ul>		
2	<ul> <li>Prostatic disorders</li> <li>Prostatitis</li> <li>Benign prostatic hyperplasia (BPH)</li> <li>Prostatic carcinoma</li> </ul>	<ul> <li>Explain the etiology and morphology of Prostatitis</li> <li>Explain the gross and microscopic morphology and complications of BPH</li> <li>Explain the clinical features, types and staging of prostatic carcinoma</li> </ul>	Large group discussion (LGD)	2

3	Sexually transmitted diseases (STDs) • Syphilis • Gonorrhea	<ul> <li>Explain the types of STDs</li> <li>Explain the stages, morphology, clinical features and complications of Syphilis</li> <li>Name the organisms causing Gonorrhea and its clinical features</li> </ul>	up n 1
4	Introduction to gynecological cancers	Enlist different types of Large gro gynecological cancers discussic (LGD)	up n 1
5	Cervical carcinoma	<ul> <li>Explain the gross and Large gro microscopic morphology, clinical discussion features and staging of Cervical (LGD) carcinoma</li> </ul>	up n 1
6	Endometritis Uterine fibroids Endometriosis	<ul> <li>Explain the etiology and pathogenesis of endometritis</li> <li>Explain the etiology and morphology of uterine fibroids</li> <li>Explain the etiology, pathogenesis and morphology of endometriosis</li> </ul>	up n 1
7	Endometrial hyperplasia and endometrial carcinoma	<ul> <li>Explain the etiology, pathogenesis, morphology of Endometrial hyperplasia</li> <li>(LGD)</li> </ul>	up n 1
8	Polycystic ovarian disease	Explain the etiology, risk factors, clinical features and morphology of Polycystic ovary syndrome (LGD)	up n 1
9	Tumors of the ovary	<ul> <li>Classify benign and malignant tumors of the ovary</li> <li>Explain the gross and microscopic morphology, clinical features, staging and complications of ovarian carcinoma</li> </ul>	up n 1
G	Synaecology (6LGDs)	Describe the anatomy of the Large gro discussion di discussion di discussion discussion di discussion discussion dis	up In 1
1	Anatomy of the reproductive tract	uterus, the adnexa and ovary (LGD)	
2	Menopause	<ul> <li>Define Menopause.</li> <li>Describe physiological and non-physiological menopause</li> <li>Explain the clinical effects of menopause on women</li> </ul>	

		•	Outline the assessment of menopausal women, based on modifiable and non-modifiable risk factors. Explain the management of menopause Describe the types, side-effects, relative and absolute contraindications of hormone replacement therapy (HRT)	Large group discussion (LGD)	1
3	Contraception		Define contraception Classify contraceptive methods Explain their mechanisms of action, efficacy and failure rates Explain the risks and benefits of each method Identify the complications of different contraceptive methods	Large group discussion (LGD)	1
4	Polycystic ovary syndrome Uterine fibroids		Explain the risk factors, etiology, clinical features, investigations, treatment, complications and prognosis of polycystic ovary syndrome Explain the risk factors, clinical features, and management of uterine fibroids	Large group discussion (LGD)	1
5	Endometrial cancers Cervical carcinomas	•	Explain the risk factors, clinical features, investigations, prognosis and management of endometrial carcinoma Explain the risk factors, clinical features, investigations, prognosis and management of cervical carcinoma	Large group discussion (LGD)	1
6	Causes of female infertility	•	Define infertility Discuss the causes of female infertility	Large group discussion (LGD)	1
Pł	narmacology (4LGDs)	•	Describe the mechanism of		
1	Gonadotropins (FSH & LH) and human chorionic gonadotropin Gonadotropin-releasing hormone and analogues (Gonadorelin and others)	•	effects of Gonadotropins (FSH & LH) and human chorionic gonadotropin (hCG) Describe the role of gonadotropins in male infertility	Large group discussion (LGD)	2

2	Oxytocin	<ul> <li>Describe the mechanism of action, clinical uses and adverse effects of Gonadotropin-releasing hormone and analogues (Gonadorelin and others)</li> <li>Describe the mechanism of action, clinical uses and adverse effects of Oxytocin</li> </ul>	Large group discussion (LGD)	1
3	Oestrogens, Progestins, Oral contraceptives, Parenteral and implantable contraceptives, Ovulation-inducing agent, Mifepristone, Danazol, Androgens & anabolic steroids, Antiandrogens, Male contraception, Selective Estrogen Receptor Modulators	<ul> <li>Classify Oestrogens</li> <li>Describe the mechanism of action, organ system effects, clinical uses, adverse effects and contraindications of Oestrogens</li> <li>Classify Progestins</li> <li>Describe the mechanism of action, organ system effects, clinical uses, adverse effects and contraindications of Progestins</li> <li>Classify Oral contraceptives</li> <li>Describe the mechanism of action, organ system effects, clinical uses, adverse effects and contraindications of oral contraceptive pills</li> <li>Describe mini pills with their advantages and disadvantages</li> <li>Describe the use of Parenteral (Medroxyprogesterone) and implantable (Norplant system) contraceptives</li> </ul>	Large group discussion (LGD)	1

		<ul> <li>Describe the mechanism of action, clinical use and adverse effects of Clomiphene</li> <li>Describe the mechanism of action, clinical uses and adverse effects of Mifepristone</li> <li>Describe the mechanism of action, clinical uses and adverse effects of Danazol</li> <li>Enlist Androgens and anabolic steroids</li> <li>Describe the mechanism of action, clinical uses and adverse effects of androgen preparations</li> <li>Classify antiandrogens</li> <li>Describe the role of Ketoconazole as steroid synthesis inhibitor, its clinical uses and adverse effects</li> <li>Describe the mechanism of action and clinical use of Finasteride</li> <li>Describe the mechanism of action and clinical use of Spironolactone as androgen receptor blocker and its use in this context</li> <li>Enlist the drugs used for male contraception</li> <li>Describe the role of Gossypol as male contraceptive agent</li> <li>Enlist Selective Estrogen Receptor Modulators (SERMs).</li> <li>Describe the mechanism of action and clinical uses of</li> </ul>	
		l'amoxiten.	
1 1	Impotence and sterility	<ul> <li>Define impotence</li> <li>Define sterility</li> <li>Examine under supervision a case of sterility and impotence</li> </ul>	
		Describe important causes discussion leading to sterility and (LGD)	1

2	Charilization	<ul> <li>impotence in males as well as in females</li> <li>Appreciate difference between sterility and impotence</li> <li>Medicolegal importance of sterility and impotence</li> </ul>		
2	Sterinzation	<ul> <li>Define sterilization</li> <li>Medicolegal importance of sterilization</li> <li>Discuss the technique of sterilization in males and females</li> <li>enumerate legal formalities before sterilization</li> </ul>	Large group discussion (LGD)	1
3	Artificial insemination	<ul> <li>Define artificial insemination</li> <li>Enumerate its different types</li> <li>Describe medicolegal aspects of artificial insemination</li> <li>Define test tube baby</li> <li>Define surrogate motherhood and enumerate its medicolegal importance</li> </ul>	Large group discussion (LGD)	1
4	Virginity	<ul> <li>Define virginity</li> <li>Discuss signs of virginity</li> <li>Enumerate different types of hymen</li> </ul>	Large group discussion (LGD)	1
5	Pregnancy	<ul> <li>Define pregnancy</li> <li>Describe presumptive signs of pregnancy</li> <li>Discuss probable signs of pregnancy</li> <li>Appreciate conclusive signs of pregnancy</li> <li>Enumerate signs of pregnancy in dead</li> <li>Discuss Medicolegal aspects of pregnancy</li> <li>Describe Isqat e Haml &amp; Isqat E Janin as per PPC</li> </ul>	Large group discussion (LGD)	1
6	Delivery	<ul> <li>Define delivery</li> <li>Appreciate signs of recent delivery in living</li> </ul>		
		Appreciate or identify signs of recent delivery in dead	Large group discussion (LGD)	1

		<ul> <li>Identify signs of remote delivery</li> </ul>		
		in living and dead		
		Enumerate medicolegal aspects		
		of delivery		
7	Legitimacy & dissolution	Define legitimacy		
	of marriage	<ul> <li>Define illegitimate child</li> </ul>		
		<ul> <li>Enumerate medicolegal aspects</li> </ul>		
		of legitimacy	Large group	
		<ul> <li>Define superfetation</li> </ul>	discussion	1
		<ul> <li>Enumerate medicolegal aspects</li> </ul>	(LGD)	
		of affiliation/ adoption		
		<ul> <li>Enlist legal grounds for nullity</li> </ul>		
		and dissolution of marriage		
8	Natural sexual offences:	<ul> <li>Define rape as per CrPC</li> </ul>		
	Rape & Incest	<ul> <li>Enumerate medicolegal aspects</li> </ul>		
		of rape	Large group	
		<ul> <li>Examine under supervision a</li> </ul>	discussion	1
		case of rape victim	(LGD)	
		<ul> <li>Examine under supervision</li> </ul>		
		examination of the accused		
		Define incest		
9	Zina	<ul> <li>Define Muhsan as per Hudood</li> </ul>		
		ordinance 1979.		
		<ul> <li>Define Zina according Huddod</li> </ul>		
		ordinance 1979.		
		<ul> <li>Enumerate the conditions</li> </ul>		
		required for liability in case of	Large group	
		Zina.	discussion	1
		<ul> <li>Enlist punishment of Zina</li> </ul>	(LGD)	
		Enumerate steps of proof of		
		Zina in the court		
		Describe steps of complaint in		
		case of Zina as per Cr PC		
10	Unnatural sexual	Define sodomy		
	ottences	Enumerate steps of examination		
	Sodomy	of passive agent in sodomy		
		<ul> <li>Enumerate steps or examination</li> </ul>	Large group	1
		Define and describe bused		T
		Define and describe buccal     coitus	(LGD)	
		Dofine and describe tribediers		
		Define and describe tribadism     Define besticity		
		Define bestiality		

11	Sexual perversions	<ul> <li>Define sexual perversions</li> <li>Enumerate its different types</li> <li>Define and describe sadism</li> <li>Define and describe masochism</li> <li>Define and describe fetishism</li> <li>Define and describe exhibitionism</li> <li>Define and describe transvestism</li> <li>Define and describe uranism</li> <li>Define and describe voyeurism</li> <li>Define and describe frotteurism</li> <li>Define and describe urolagnia</li> </ul>	Large group discussion (LGD)	1
12	Abortion	<ul> <li>Define abortion</li> <li>enumerate its different types</li> <li>enumerate salient features of natural abortion</li> <li>enumerate salient features of artificial abortion</li> <li>differentiate between natural and criminal abortion</li> <li>examine under supervision a case of criminal abortion and legal formalities to be fulfilled in such a case</li> </ul>	Large group discussion (LGD)	1
1	Urology(1LGD) Causes of male infertility	<ul> <li>Discuss the causes of male infertility</li> <li>Explain the diagnostic workup of a male infertile patient</li> </ul>	Large group discussion (LGD)	1
	Surgery (2LGDs)	<ul> <li>Define Cryptorchidism</li> <li>Explain the etiology,</li> </ul>		
1	Cryptorchidism Hydrocele and varicocele	<ul> <li>Complications and management of Cryptorchidis</li> <li>Explain the cause, clinical features, complications and surgical management of hydrocele and varicocele.</li> </ul>	Large group discussion (LGD)	1
2	Benign prostatic hyperplasia Carcinoma of prostate	<ul> <li>Explain the etiology, clinical features, complications and management of BPH.</li> <li>Explain the etiology, clinical features, complications, staging,</li> </ul>	Large group discussion (LGD)	1

		management and prognosis of carcinoma of the prostate.		
Comn	nunity Medicine (5LGDs)	<ul><li>Define reproductive health.</li><li>Describe components of</li></ul>		
1	Safe motherhood	<ul><li>reproductive health.</li><li>Define safe motherhood.</li><li>Discuss pillars of safe motherhood.</li></ul>	Large group discussion (LGD)	1
2	Antenatal care and Post abortion care	<ul> <li>Discuss antenatal care.</li> <li>Discuss antenatal visits as per WHO.</li> <li>Discuss Post abortion care.</li> </ul>	Large group discussion (LGD)	1
3	Family planning and	<ul> <li>Define family planning.</li> <li>Discuss different methods of family planning.</li> <li>Discuss contraceptive prevalence rate and factors responsible for low CPR.</li> </ul>	Large group discussion (LGD)	1
4	Child promotion and development strategies (IMNCI, IMCI and growth monitoring)	<ul> <li>Define IMNCI &amp; IMCI.</li> <li>Describe components of IMNCI.</li> <li>Enumerate principles of IMNCI.</li> <li>Discuss growth monitoring.</li> </ul>	Large group discussion (LGD)	1
5	Prevention of reproductive health diseases.	<ul> <li>Discuss different reproductive health diseases.</li> <li>Discuss STIs in detail.</li> <li>Discuss risk factors and Prevention of CA cervix.</li> </ul>	Large group discussion (LGD)	1
Far 1	nily medicine (3LGDs) Menstrual disorders Menopause	<ul> <li>Enlist menstrual disorders.</li> <li>Explain the etiology, investigations and management of menstrual disorders in primary care.</li> <li>Explain the clinical features, and management of menopausal symptoms and complications in primary care</li> </ul>	Large group discussion (LGD)	1
2	Contraception	<ul> <li>Explain the types of contraception methods.</li> <li>Explain the merits and demerits of different contraceptive techniques.</li> <li>Describe the complications</li> </ul>	Large group discussion (LGD)	1

		associated with the use of oral and injectable contraceptives.		
3	Vaginal discharge and STDs	<ul> <li>Explain the etiology of vaginal discharge.</li> <li>Describe the diagnosis and management of vaginal discharge in primary care.</li> <li>Classify Sexually transmitted infections in females.</li> <li>Describe the clinical features, investigations and management of STDs in females in primary care.</li> </ul>	Large group discussion (LGD)	1

	Theme 6	Breast Lump (7LGDs)	
	Subject	Learning Outcomes MIT	No. of hours
1	Pathology (2LGDs)Fibrocystic changes• Cystsandfibrosis• Epithelialhyperplasia• AdenosisFibro-adenomaPapilloma	<ul> <li>Explain the fibrocystic changes in breast including cysts, fibrosis, epithelial hyperplasia and adenosis.</li> <li>Explain the morphology of Fibroadenoma of the breast.</li> <li>Explain the morphology of papilloma of the breast.</li> </ul>	1
2	Carcinoma of the breast Gynecomastia	<ul> <li>Explain the risk factors, etiolopathogenesis, clinical features, staging, and complications of carcinoma of the breast.</li> <li>Discuss the causes and morphology of Gynecomastia.</li> </ul>	1
	Surgery (2LGDs)		

1	Investigations of breast diseases Benign breast diseases	<ul> <li>Justify the investigations of a patient with a breast lesion.</li> <li>Classify benign breast diseases.</li> </ul>	Large group discussion (LGD)	1
2	Malignant breast diseases	<ul> <li>Classify malignant breast diseases.</li> <li>Discuss the risk factors, etiology, clinical features, investigations, management and prognosis of a patient with breast cancer.</li> <li>Describe the role of hormone receptors in breast cancer.</li> <li>Explain the complications of breast cancer surgery.</li> <li>Discuss the role of pharmacological treatment options in breast cancer management.</li> <li>Explain the role of selective estrogen receptors modulators in the prevention of breast cancer in high risk women.</li> </ul>	Large group discussion (LGD)	2
Comr 1	nunity Medicine (1LGD) Breast feeding Screening and prevention of breast cancer	<ul> <li>Discuss advantages of breast feeding.</li> <li>Discuss artificial feeding.</li> <li>Discuss baby friendly hospital initiative.</li> <li>Discuss guidelines on infant and child feeding.</li> <li>Discuss different methods of screening for breast cancer.</li> <li>Discuss levels of prevention of breast cancer.</li> </ul>	Large group discussion (LGD)	1
	Radiology (1LGD)	Explain the indications, procedure,     and interpretation of ultracound		
1	Radiological approaches to breast cancer screening	and mammography in the investigation of breast lumps	discussion (LGD)	1
Prir	ne/Medical Education (1LGD)	<ul> <li>Explain the concept of SPICES model of breaking bad news.</li> </ul>	Large group discussion	1
1	Counselling- Breaking bad news		(LGD)	

#### Practical work

Sub	ject: Pharmacology	Learning Outcomes	No. of hours
1	Prescription for Graves' disease, Hypothyroidism	<ul> <li>Formulate prescription for a patient with Graves' disease.</li> </ul>	2
2	Prescription for Diabetes mellitus	<ul> <li>Formulate prescription for a patient with type 1 and type 2 Diabetes mellitus.</li> </ul>	2
Sub 1	ject: Pathology Glucose estimation	<ul><li>Check glucose in urine.</li><li>Check blood glucose in a given sample</li></ul>	2
2	Goitre	Identify the microscopic features of multinodular goitre	2
3	Pap smear	Interpret a pap smear	2
4	Fibroids	<ul> <li>Identify the microscopic features of uterine fibroids</li> </ul>	2
5	Carcinoma breast	<ul> <li>Identify the microscopic features of carcinoma of the breast</li> </ul>	2
3	Aldosterone antagonists	<ul> <li>Describe the mechanism of action, clinical uses and adverse effects of Spironolactone (apart from being used as diuretic)</li> </ul>	2
Sub	ject: Forensic Medicine	<ul> <li>Take consent from a rape victim</li> <li>Examine a rape victim/manikin</li> <li>Describe the procedure of taking</li> </ul>	2
1	Examination of a rape victim and assailant	<ul> <li>sample from the victim/manikin/item</li> <li>Describe the procedure of Sealing and preservation of the specimen</li> </ul>	
2	Examination of sodomy victim and assailant	<ul> <li>Describe the procedure of Examining a victim of sodomy</li> <li>Describe the procedure of Taking sample from the</li> </ul>	2

		<ul> <li>victim/manikin/item</li> <li>Describe the procedure of Sealing and preservation of the specimen.</li> </ul>	
Sub Me	ject: Community dicine Contraception	<ul> <li>Identify the contraceptive device/drug</li> <li>Explain the merits and demerits</li> <li>Discuss the method of administration of the given device/drug</li> </ul>	2
2	Mother and child health IMCI- Shakir`s tape Growth chart	<ul> <li>Identify the chart</li> <li>Devise a schedule plan for antenatal visits as per WHO criteria</li> <li>Identify the model</li> <li>Measure the mid-arm circumference</li> <li>Identify the chart</li> <li>Plot the graph using a scenario</li> <li>Interpret different parts of the chart</li> <li>Calculate the weight and height of the child</li> <li>Interpret the results</li> </ul>	2
3	EPI schedule Vaccination and immunization Tetanus Toxide	<ul> <li>Counsel the mother for EPI schedule</li> <li>Identify the vaccine</li> <li>Explain its uses</li> <li>Discuss its schedule of administration</li> <li>Discuss the results of VVM (vaccine voile monitor) and its uses in epidemics</li> </ul>	2
4	Demographic indicators	<ul> <li>Interpret the given demographic indicator (population pyramid, HDI, PQLI, Growth rate and dependency ratio)</li> </ul>	2

Hours Distribution			
The	ory		
Discipline	No. of hours		
Physiology	02		
Pathology	26		
Pharmacology	12		
Forensic Medicine	12		
Community Medicine	22		
General Medicne	19		
Eye	16		
ENT	23		
Pediatrics	03		
Surgery	04		
Gynae & Obs	06		
Neurosurgery	01		
Urology	01		
Family Medicne	03		
Radiology	01		
PRIME/DME	02		
Total	153		
Practica	I/ SGDs		
Pathology	12		
Pharmacology	04		
Forensic Medicine	04		
Community Medicine	08		
Total	28		



#### 8 Examination and Methods of Assessment:

The year-4 will be assessed in 5 blocks.

- 1) Block-1 (Neurosciences-2 module) will be assessed in paper-J.
- 2) Block-2 (GIT and hepatobiliary module-2 will be assessed in paper-K.
- 3) Block-3 (Renal-2, Endocrine and Reproduction-2 module) will be assessed in paper-L.
- 4) Block-4 (ENT module) will be assessed in paper M-1.
- 5) Block-5 (Eye module) will be assessed in paper M-2.
- Each written paper consists of 120 MCQs except for ENT & Eye papers which includes 90 MCQs each.
- 7) Internal assessment will be added to final marks in KMU.
- 8) For ENT (M-1 module) and Eye (M-2 module), the marks allocated for each OSCEstation will be 5, while the rest of the modules are allotted 6 marks per OSCE station.
- Practical assessment will be in the form of OSPE/OSCE which will also include embedded viva stations.
- 10) The details of each section are given in the tables below.

	Assessment Plan for 4 <sup>th</sup> Year MBBS					
Theory paper	Modules	Theory marks	Internal assessment theory (10%)	OSPE/OSP E	Internal assessment OSPE/OSP E(10%)	TOTA L MARK S
Paper J	Neurosciences-2	120	13	120	13	266
Paper K	GIT-2	120	13	120	13	266
Paper L	Renal-2 and Endocrine and Reproduction	120	14	120	13	267
Paper M-1	ENT	90	10	75*	8	183
Paper M-2	EYE	90	10	75*	8	183
Research**						35
Total Marks		480	53	500	67	1200

\*For ENT (M-1 module) and Eye (M-2 module), the marks allocated for each OSCE station will be 5, while the rest of the modules are allotted 6 marks per OSPE/OSCE station.

\*\*Research viva of 20 marks will be conducted in paper-L. However, the rest of the 15 markswill be decided by the

concerned department internally for the contribution of the studentsin research project/thesis.

## Paper-L (Renal-2, and Endocrine and Reproduction-2)

Subject	Renal-2	Endocrine and Reproduction-2	Total MCQs
Community medicine	11	6	17
Pharmacology	02	07	09
Pathology	11	12	23
Forensic medicine	01	06	07
Surgery	06	03	09
Gynaecology	01	39	40
Medicine	05	05	10
Pediatrics	02	01	03
Family medicine	01	01	02
Total	40	80	120

## **MCQs**

## **OSPE/OSCE**

Subject	Viva stations	OSPE/OSC E	Total
Pharmacology	2	1	3
Pathology	2	2	4
Forensic medicine	2	1	3
Community	2	4	8
medicine			
Research viva	2**	Х	
Gynecology	1	2	3
Medicine	0	1	1
(Endocrinology/DM)			
Total	11	11	22

\* A minimum of 22 stations will be used in final exams. The total marks will be 120 (6 marks for each station).

\*\*there will be 2 allocated stations for research viva (one internal and one external)at one time for which the number of marks for each station will be 10 (with a total 20 marks) allocated for research viva plus 15 marks for conducting research). A total of 35 marks have been allocated for the thesis (research project).

Exam. Roll No	
DEPARTMENT OF COMMUNITY MEDICINE	
AYUB MEDICAL COLLEGE	
ABBOTTABAD	Photograph
Class Roll No:	
Mr/Miss:	
Father's Name:Domicile:	
Present Address:	

#### **RECORD OF ATTENDANCE**

	SESSION	TOTAL HOURS	TOTAL	DEPCENTAGE	
WONTHS	STARTED	TAKEN	ATTENDANCE	FIRENTAGE	
March	2021				
June	2021				
July	2021				
August	2021				
September	2021				
October	2021				
November	2021				
December	2021				
R/Project	2021				
TOTAL	2021				

#### VISIT TEST/ R. PROJECT

Visit Test (=/20)		
Research project (=/25)		

#### **RECORD OF PERFORMANCE**

TEST	MARKS	REMARKS
Test No. 1		

Test No. 2	
Test No. 3	
Test No. 4	
Total (=/10)	

#### PAST ACADEMIC RECORD

2 <sup>nd</sup> Professional Exam	Session	Result
3 <sup>rd</sup> Professional Exam	Session	Result
Remarks by the Tutor		



#### 9 Learning Opportunities and Resources

#### 9.1 INSTRUCTION

Dear students! NEVER use guides and substandard books for learning and exam preparation. Following are the books , website links and articles recommended for you.

#### **9.2 BOOKS:**

#### **Pathology**

Robbins basic Pathology first south Asia edition

Chemical Pathology for the beginner by Ammir Ejaz

#### Community Medicine:

Park K. Park's textbook for preventive and social medicine. 23<sup>rd</sup> ed. Bhanot publishers: Jabalpur;2015 Ansari I. Textbook of Community Medicine

NCBI Books. Contraception and Reproduction: Health Consequences for Women and Children in the

Developing World. National Research Council (US) Committee on Population. Washington (DC): National

Academies Press (US); 1989.

#### **Pharmacology**

Basic & Clinical Pharmacology, 14<sup>th</sup> edition

Goodman Gilman's The Pharmacological Basis of Therapeutics, 13th edition

Lippincott Illustrated Reviews Pharmacology, 7th edition

#### Neurosurgery

Greenberg. Handbook of neurosurgery.20<sup>th</sup> ed.

Forensic Medicine:

Principles & Practice of Forensic Medicine Nasib R. Awan

Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology

Textbook of Forensic Medicine & Toxicology Nageshkumar G. Rao, Jaypee.

#### Surgery

Bailey and Love's short practice of surgery

#### **Gynaecology**

Rashid Latif Khan. Textbook of Gynaecology. 7<sup>th</sup> edition <u>Paediatrics</u>

Nelson textbook of Paediatrics, 21st edition

Textbook of paediatrics, Pakistan Paediatrics association

Parvez Akbar Khan. Basis of Paediatrics. 9th ed

#### Medicine

Davidson's Principles and practice of Medicine

#### **Physiology**

Guyton and Hall's textbook of Medical Physiology

#### 9.3 WEBSITE:

Community Medicine:

Link for free download PDF Park's textbook for preventive and social medicine:

https://medicalstudyzone.com/download-parks-textbook-of-preventive-and-social-medicine-25th-edition-pdf-

free/#Download Park8217s Textbook of Preventive and Social Medicine PDF free

Pakistan Demographic and Health Survey, Pakistan (2017-18):

https://dhsprogram.com/pubs/pdf/FR354/FR354.pdf

IMNCI: IMNCI Management of Childhood Illness Chart Booklet Pakistan WHO 2019.pdf

Baby friendly Hospital Initiative: <u>https://www.who.int/elena/titles/bbc/implementation\_bfhi/en/</u> Infant and Child Feeding:

https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding

#### Shakir's Tape or Midupper arm circumference:

tape:https://www.unicef.org/supply/media/1421/file/mid-upper-arm-circumference-measuring-tapestechnical-bulletin.pdf

Forensic Medicine:

https://worldofmedicalsaviours.com/textbook-of-forensic-medicine-and-toxicology-by-nageshkumar-rao-pdf-free-download/

Punjab Forensic science agency (PFSA) Guidelines: https://pfsa.punjab.gov.pk/guidelines for evidence

#### 9.4 ARTICLES:

#### Community Medicine:

Moore ML. Breastfeeding Benefits Support -Research. Sci J of Gyne and Obste 2018; 1(1): 001-002 Zubin G, Looi E. Protein Energy Malnutrition. Pediatric clinics of North America 2009; 56: 1055-68. 10.1016/j.pcl.2009.07.001.

#### **Department of Medical Education**

#### Time Table 4<sup>th</sup> Year MBBS

#### Class Session 2023

#### Block-L: (Endocrine & Reproduction-II Module)

#### Hours allocation of disciplines

S. No	Subject	Hours allocated
1	Pathology	26(LGDs)+12(SGDs)=38
2	Community medicine	22(LGDs)+8(SGDs)=30
3	Medicine	19(LGDs)
4	Pharmacology	13(LGDs)+4(SGDs)=17
5	Forensic medicine	12(LGDs)+4(SGDs)=16
6	Research*	14**
7	Gynaecology	06(LGDs)
8	Surgery	05(LGDs)
9	Pediatrics	03(LGDs)
10	Family medicine	03(LGDs)
11	PRIME/MEDICAL EDUCATION	02(LGDs)
12	Physiology	01(LGD)
13	Urology	01(LGD)
14	Neurosurgery	01(LGD)
15	Radiology	01(LGD)
	Total	115(LGDs)+28(SGDs)=143

\* two hours per week for research project in the whole academic session

\*\*these hours are neither included in total hours nor in assessment as separate marks have been allotted

to research in viva

### 10 Timetable

#### AYUB MEDICAL COLLEGE, ABBOTTABAD Endocrinology & Reproduction II, Block L, 4<sup>th</sup> Year MBBS Class Session 2023

Day	8:00am-9:00 am	9:00am-10:00 am	10:0 0am - 12:0 0pm	12:00pm-12:45pm	12:4 5pm - 1:15 pm	1:15pm- 2:00pm	2:00pm- 3:00pm
Mon	Pathology LGIS:L1 Pit Anat/Physio	Medicine LGIS:L1 Acromegaly & Hyperprolactinemi a		Community Medicine LGIS:L1 Occ Health intro Dr Zeeshan		Practical work Pharm/ EPI sch Vaccination ar immunization Tetanus Toxido	nedule nd e
Tues	Pharmacology LGIS:L1 GH & Antagonists Dr. Jamila Sahir	Pathology LGIS:L2 Hypopitutarism		Medicine LGIS:L2 Hypopituitarism	break	Practical work Pharm/ EPI sch Vaccination ar immunization Tetanus Toxido	nedule nd e
Wed	Paediatrics LGIS:L1 Short stature	Community Medicine LGIS:L2 Physical Hazard Dr Zeeshan	Hospital Wards	Pathology LGIS:L3 Hyperpitutarism	Prayer	Research/Path	1
Thurs	Community Medicine LGIS:L3 Chemical Hazard Dr Zeeshan	Neurosurgery LGIS:L1 Pituitary Adenoma		Med Edu LGIS Dealing with patients		Research/Path	1
Fri	Physiology LGIS:L1 Thyroid	Community Medicine LGIS:L4 Mech hazard Dr Zeeshan		Pharmacology LGIS:L2 Thyroid Hormones Dr. Afsheen	Half D	ay	

Endocrinology & Reproduction II, Block L, 4 <sup>th</sup> Year MBBS									
	Class Session 2023								
Day	8:00am-9:00 am	9:00am-10:00 am	10: 00a	12:00pm-12:45pm	12:4 5pm	1:15pm- 2:00pm	2:00pm- 3:00pm		
			m- 12: 00p m		- 1:15 pm				
Mon	Pathology LGIS:L4 Hyperthyroidism	Medicine LGIS:L3 Hyperthyroidism		Community Medicine LGIS:L5 Animal Hazard		Practical work Demographic /Path goitre	indicators		
Tues	Pharmacology LGIS:L3 Antithyroid drugs Dr. Afsheen	Community Medicine LGIS:L6 Social security Dr Zeeshan		Pathology LGIS:L5 Hypothyroidism	reak	Practical work Demographic /Path goitre	indicators		
Wed	Community Medicine LGIS:L7 Demo intro Dr. Sobia	Medicine LGIS:L4 Hypothyroidism	spital Wards	Paediatrics LGIS Cong hypothyroidism	Prayer b	Research/Path	1		
Thurs	Medicine LGIS:L4 Thyroiditis	Pathology LGIS:L5 Thyroiditis	H	Community Medicine LGIS:L8 Growth rate Dr. Sobia		Research/Path	1		
Fri	Pathology LGIS:L5 Thyroid malignancies	Community Medicine LGIS:L9 Demo indi Dr. Sobia		Medicine LGIS:L4 Thyroid malignancies	Half D	ау			

### AYUB MEDICAL COLLEGE, ABBOTTABAD Endocrinology & Reproduction II, Block L, 4<sup>th</sup> Year MBBS

	AYUB MEDICAL CULLEGE, ABBUTTABAD									
	Endocrinology & Reproduction II, Block L, 4 <sup>th</sup> Year MBBS									
	Class Session 2023									
Day	8:00am-9:00 am	9:00am-10:00 am	10:0 0am - 12:0 0pm	12:00pm-12:45pm	12:45p m- 1:15p m	1:15pm- 2:00pm	2:00pm- 3:00pm			
Mon	Medicine LGIS:L3 Hyper/hypo parathyroidism	Community Medicine LGIS:L10 IDD Dr. Zainab		Pathology LGIS DM		Practical work Pharm/Path gl estimation	ucose			
Tues	Medicine LGIS:L3 DM	Paediatrics DM in children	Wards	Community Medicine LGIS:L11 DM prevention Dr. Zainab	ayer break	Practical work Pharm/Path gl estimation	ucose			
Wed	Pharmacology Insulin/glucagon Dr. Mehwish Gul	Pathology Pancreatic tumors	Hospital V	Medicine LGIS:L3 Hypoglycemic coma		Research/Path	1			
Thurs	Medicine LGIS:L4 ketoacidosis	Pharmacology Oral Hypoglycemics 1 Dr. Adeel Alam		Medicine SIADH		Research/Path	1			
Fri	Pharmacology Oral Hypoglycemics 2 Dr. Adeel Alam	Physiology Adrenal cortex		Pathology Hypercortisolism	Half Day					

Endocrinology & Reproduction II, Block L, 4 <sup>th</sup> Year MBBS									
	Class Session 2023								
Day	8:00am-9:00 am	9:00am-10:00 am	10:0 0am - 12:0 0pm	12:00pm-12:45pm	12:4 5pm - 1:15 pm	1:15pm- 2:00pm	2:00pm- 3:00pm		
Mon	Medicine Hypercortisolism	Community Medicine LGIS:L12 Nutrition intro Macronutrients Dr. Zainab		Pathology LGIS Hyperaldosteronis m		Practical work IMCI- Shakir`s ta /Path aldosteror antagonists	pe ne		
Tues	Medicine LGIS:L3 Primary Hyperaldosteron ism	Community Medicine LGIS:L13 Micronutrients Dr. Zainab		Pathology LGIS Adrenal insufficiency	break	Practical work IMCI- Shakir`s ta /Path aldosteror antagonists	pe ne		
Wed	Pathology Adrenal neoplasms	Community Medicine LGIS:L14 Micronutrients 2 Dr. Zainab	Hospital ards	Medicine LGIS:L3 Adrenogenital syndrome	Prayer	Research			
Thurs	Medicine LGIS:L4 Adrenal insufficiency	Pharmacology Glucocorticoid 1 Dr. Sumbal		Community Medicine LGIS:L15 Undernutrition Dr. Zainab		Research			
Fri	Medicine Adrenal neoplasms	Pathology Pheochromocytoma		Community Medicine LGIS:L16 Overnutrition Dr. Zainab	Half D	ay			

	<u>E</u>	Endocrinology & Rep	product	ion II, Block L, 4 <sup>th</sup> Year	r MBBS		
		<u>C</u>	lass Ses	sion 2023			
Day	8:00am-9:00 am	9:00am-10:00 am	10:0 0am - 12:0	12:00pm-12:45pm	12:4 5pm - 1:15	1:15pm- 2:00pm	2:00pm- 3:00pm
Mon	Medicine Pheochromocyto ma	Community Medicine LGIS:L17 Safe motherhood Dr. Rizwana	Opm	Pharmacology Glucocorticoids 2 Dr. Sumbal	pm	Practical work Mother and ch Growth chart	ild health
Tues	Pharmacology Glucocorticoids Antagonists Dr. Sumbal	Community Medicine LGIS:L18 Antenatal/Post abortion care Dr. Rizwana		Gynaecology Anatomy of the reproductive tract	/er break	Practical work Moth health Growth chart	er and child
Wed	Family med Menstrual disorders Menopause	Community Medicine LGIS:L19 Family planning Dr. Sobia	Hospital Wards	Gynaecology Menopause	Pray	Research/Path	I
Thurs	Pharmacology Gonadotropins 1 Dr. Nisar	Family med Contraception		Community Medicine LGIS:L20 IMNCI Dr. Rizwana		Research/Path	I
Fri	Community Medicine LGIS:L21 Prevention of reproductive health diseases Dr. Rizwana.	Pharmacology Gonadotropins 2 Dr. Nisar		Forensic Med Impotence and sterility Dr. Omair	Half D	ау	

### AYUB MEDICAL COLLEGE, ABBOTTABAD Endocrinology & Reproduction II, Block L, 4<sup>th</sup> Year MBBS

	Endocrinology & Reproduction II, Block L, 4 <sup>th</sup> Year MBBS									
	Class Session 2023									
Day	8:00am-9:00 am	9:00am-10:00 am	10:0 0am - 12:0 0pm	12:00pm-12:45pm	12:4 5pm - 1:15 pm	1:15pm- 2:00pm	2:00pm- 3:00pm			
Mon	Forensic Med Sterilization Dr. Omair	Pharmacology Oxytocin Dr. Mehwish		Urology Causes of male infertility		Practical work CM contracep Pap smear	tion/Path			
Tues	Forensic Med Artificial insemination Dr. Sadia	Gynaecology Polycystic ovary syndrome Uterine fibroids	ds	Pathology Testicular tumors	er break	Practical work CM contracep Pap smear	tion/Path			
Wed	Pathology Prostatic disorders	Forensic Med Virginity Dr. Salma Shazia	Hospital Wa	Surgery Cryptorchidism Hydrocele and varicocele	Praye	Research/Path	1			
Thurs	Surgery BPH/Prostate Ca	Pathology STDs		Family Med Vaginal discharge and STDs		Research/Path	1			
Fri	Forensic Med Pregnancy Dr. Salma Shazia	Pathology Introduction to gynecological cancers		Gynaecology Endometrial cancers Cervical carcinomas	Half D	ay				

	Endocrinology & Reproduction II, Block L, 4 <sup>th</sup> Year MBBS									
	Class Session 2023									
Day	8:00am-9:00 am	9:00am-10:00 am	10:00 am- 12:00 pm	12:00pm-12:45pm	12:4 5pm - 1:15 pm	1:15pm- 2:00pm	2:00pm- 3:00pm			
Mon	Pathology Endometritis Uterine fibroids Endometriosis	Forensic Med Delivery Dr. Salma Shazia		Gynaecology Contraception		Practical work Forensic Med fibroids	Rape/Path			
Tues	Forensic Med Legitimacy & dissolution of marriage Dr. Salma Shazia	Pathology Endometrial hyperplasia and endometrial carcinoma	ν	Pharmacology Contraceptives Dr. Saima Bukhari	break	Practical work Forensic Med Rape /Path Fibroids				
Wed	Forensic Med Natural sexual offences: Rape & Incest Dr. Salma Shazia	Pathology Polycystic ovarian disease	Hospital Ward	Gynaecology Causes of female infertility	Prayer	Research/				
Thurs	Pathology Polycystic ovarian disease	Forensic Med Zina Dr. Salma Shazia		SDL		Research/				
Fri	Forensic Med Unnatural sexual offences Sodomy	Pathology Tumors of the ovary		SDL	Half D	ay				

		Endocrinology &	Reproduct	tion II, Block L, 4 <sup>th</sup> Ye	<u>ear MBBS</u>		
			Class Ses	sion 2023			
Day	8:00am-9:00 am	9:00am-10:00 am	10:00a m- 12:00p m	12:00pm-12:45pm	12:45p m- 1:15p m	1:15pm- 2:00pm	2:00pm- 3:00pm
Mon	Forensic Med Sexual perversions Dr. Inayat	Prime/Med edu Counselling- Breaking bad news		Community Med Breast feeding Screening and prevention of breast cancer Dr. Zainab	Prayer break	Practical work Forensic Med /Path Ca breas	sodomy st
Tues	Forensic Med Abortion Dr. Salma Shazia	Pathology Fibrocystic changes		Surgery Investigations of breast diseases Benign breast diseases		Practical work Forensic Med /Path Ca breas	sodomy st
Wed	Pathology Carcinoma of the breast Gynecomastia	Surgery Malignant breast diseases		Radiology Radiological approaches to breast cancer screening		Research	
Thurs	SDL	SDL		SDL		Research	
Fri	SDL	SDL		SDL	Half Dav		



### Please contact Dr. Adnan Rasheed(0333-9974207) Module Coordinator dr.adnanrashid@gmail.com



## 12 Course Feedback Form

Semester/Module Dates:   Please fill the short questionnaire to make the course better.   Please respond below with 1, 2, 3, 4 or 5, where 1 and 5 are explained.   THE DESIGN OF THE MODLUE   Were objectives of the course clear to you?   Y   N   Che course contents met with your expectations   I. Strongly disagree   5. Strongly agree   The lecture sequence was well-planned   I. Strongly disagree   5. Strongly agree   The contents were illustrated with   I. Too few examples   5. Adequate examples   The level of the course was   I. Too low   5. Too high   The course contents compared with your expectations   I. Too theoretical   5. Too empirical   The course exposed you to new knowledge and practices   I. Strongly disagree   S. Strongly agree	Course Title:		
Please fill the short questionnaire to make the course better. Please respond below with 1, 2, 3, 4 or 5, where 1 and 5 are explained. THE DESIGN OF THE MODLUE Were objectives of the course clear to you? Y N  The course contents met with your expectations I. Strongly disagree 5. Strongly agree The lecture sequence was well-planned I. Strongly disagree 5. Strongly agree The contents were illustrated with I. Too few examples 5. Adequate examples The level of the course was I. Too low 5. Too high The course contents compared with your expectations I. Too theoretical 5. Too empirical The course exposed you to new knowledge and practices I. Strongly disagree 5. Strongly agree Will you recommend this course to your colleagues? I. Not at all 5. Very strongly	Semester/Module	Dates:	
Please respond below with 1, 2, 3, 4 or 5, where 1 and 5 are explained. THE DESIGN OF THE MODLUE Were objectives of the course clear to you? Y N  The course contents met with your expectations I. Strongly disagree 5. Strongly agree The lecture sequence was well-planned I. Strongly disagree 5. Strongly agree The contents were illustrated with I. Too few examples 5. Adequate examples The level of the course was I. Too low 5. Too high The course contents compared with your expectations I. Too theoretical 5. Too empirical The course exposed you to new knowledge and practices I. Strongly disagree 5. Strongly agree Will you recommend this course to your colleagues? I. Not at all 5. Very strongly	Please fill the short questionna	ire to make the course better.	
THE DESIGN OF THE MODLUE Were objectives of the course clear to you? Y N The course contents met with your expectations I. Strongly disagree 5. Strongly agree The lecture sequence was well-planned I. Strongly disagree 5. Strongly agree The contents were illustrated with I. Too few examples 5. Adequate examples The level of the course was I. Too low 5. Too high The course contents compared with your expectations I. Too theoretical 5. Too empirical The course exposed you to new knowledge and practices I. Strongly disagree 5. Strongly agree Will you recommend this course to your colleagues? I. Not at all 5. Very strongly	Please respond below with 1, 2	, 3, 4 or 5, where 1 and 5 are explaine	ed.
THE DESIGN OF THE MODLUE   Were objectives of the course clear to you? Y   N			
Were objectives of the course clear to you? Y N   The course contents met with your expectations I. Strongly disagree 5. Strongly agree The lecture sequence was well-planned I. Strongly disagree 5. Strongly agree The contents were illustrated with I. Too few examples 5. Adequate examples The level of the course was I. Too low 5. Too high The course contents compared with your expectations I. Too theoretical 5. Too empirical The course exposed you to new knowledge and practices I. Strongly disagree 5. Strongly agree Will you recommend this course to your colleagues? I. Not at all 5. Very strongly	THE DESIGN OF THE MODLUE		
The course contents met with your expectations I. Strongly disagree 5. Strongly agree The lecture sequence was well-planned I. Strongly disagree 5. Strongly agree The contents were illustrated with I. Too few examples 5. Adequate examples The level of the course was I. Too low 5. Too high The course contents compared with your expectations I. Too theoretical 5. Too empirical The course exposed you to new knowledge and practices I. Strongly disagree 5. Strongly agree Will you recommend this course to your colleagues? I. Not at all 5. Very strongly	Were objectives of the course of	clear to you? Y N	
<ul> <li>I. Strongly disagree 5. Strongly agree</li> <li>The lecture sequence was well-planned</li> <li>I. Strongly disagree 5. Strongly agree</li> <li>The contents were illustrated with</li> <li>I. Too few examples 5. Adequate examples</li> <li>The level of the course was</li> <li>I. Too low 5. Too high</li> <li>The course contents compared with your expectations</li> <li>I. Too theoretical 5. Too empirical</li> <li>The course exposed you to new knowledge and practices</li> <li>I. Strongly disagree 5. Strongly agree</li> <li>Will you recommend this course to your colleagues?</li> <li>I. Not at all 5. Very strongly</li> </ul>	The course contents met with y	our expectations	
The lecture sequence was well-planned I. Strongly disagree 5. Strongly agree The contents were illustrated with I. Too few examples 5. Adequate examples The level of the course was I. Too low 5. Too high The course contents compared with your expectations I. Too theoretical 5. Too empirical The course exposed you to new knowledge and practices I. Strongly disagree 5. Strongly agree Will you recommend this course to your colleagues? I. Not at all 5. Very strongly	I. Strongly disagree 5. Stron	nglyagree	
<ul> <li>I. Strongly disagree 5. Strongly agree</li> <li>The contents were illustrated with <ol> <li>Too few examples 5. Adequate examples</li> <li>The level of the course was</li> <li>Too low 5. Too high</li> </ol> </li> <li>The course contents compared with your expectations <ol> <li>Too theoretical 5. Too empirical</li> <li>The course exposed you to new knowledge and practices</li> <li>Strongly disagree 5. Strongly agree</li> </ol> </li> <li>Will you recommend this course to your colleagues? <ol> <li>Not at all 5. Very strongly</li> </ol> </li> </ul>	The lecture sequence was well-	planned	
The contents were illustrated with I. Too few examples 5. Adequate examples The level of the course was I. Too low 5. Too high The course contents compared with your expectations I. Too theoretical 5. Too empirical The course exposed you to new knowledge and practices I. Strongly disagree 5. Strongly agree Will you recommend this course to your colleagues? I. Not at all 5. Very strongly	I. Strongly disagree 5. Stron	nglyagree	
<ul> <li>I. Too few examples 5. Adequate examples</li> <li>The level of the course was</li> <li>I. Too low 5. Too high</li> <li>The course contents compared with your expectations</li> <li>I. Too theoretical 5. Too empirical</li> <li>The course exposed you to new knowledge and practices</li> <li>I. Strongly disagree 5. Strongly agree</li> <li>Will you recommend this course to your colleagues?</li> <li>I. Not at all 5. Very strongly</li> </ul>	The contents were illustrated w	vith	
The level of the course was  I. Too low 5. Too high  The course contents compared with your expectations  I. Too theoretical 5. Too empirical  The course exposed you to new knowledge and practices  I. Strongly disagree 5. Strongly agree Will you recommend this course to your colleagues?  I. Not at all 5. Very strongly	I. Too few examples 5. Adec	juate examples	
<ul> <li>I. Too low 5. Too high</li> <li>The course contents compared with your expectations</li> <li>I. Too theoretical 5. Too empirical</li> <li>The course exposed you to new knowledge and practices</li> <li>I. Strongly disagree 5. Strongly agree</li> <li>Will you recommend this course to your colleagues?</li> <li>I. Not at all 5. Very strongly</li> </ul>	The level of the course was		
The course contents compared with your expectationsI. Too theoretical5. Too empiricalThe course exposed you to new knowledge and practicesI. Strongly disagree5. Strongly agreeWill you recommend this course to your colleagues?I. Not at all5. Very strongly	I. Too low 5. Too high		
<ul> <li>I. Too theoretical 5. Too empirical</li> <li>The course exposed you to new knowledge and practices</li> <li>I. Strongly disagree 5. Strongly agree</li> <li>Will you recommend this course to your colleagues?</li> <li>I. Not at all 5. Very strongly</li> </ul>	The course contents compared	with your expectations	
<ul> <li>The course exposed you to new knowledge and practices</li> <li>I. Strongly disagree 5. Strongly agree</li> <li>Will you recommend this course to your colleagues?</li> <li>I. Not at all 5. Very strongly</li> </ul>	I. Too theoretical 5. Too	empirical	
<ul><li>I. Strongly disagree 5. Strongly agree</li><li>Will you recommend this course to your colleagues?</li><li>I. Not at all 5. Very strongly</li></ul>	The course exposed you to new	v knowledge and practices	
Will you recommend this course to your colleagues? I. Not at all 5. Very strongly	I. Strongly disagree 5. Stron	nglyagree	
I. Not at all 5. Very strongly	Will you recommend this cours	e to your colleagues?	
	I. Not at all 5. Very strongly	/	

THE CONDUCT OF THE MODLUE										
The lectures were clear and easy to understand										
I. Strongly disagree	Strongly disagree 5. Strongly agree									
The teaching aids were effectively used										
I. Strongly disagree	. Strongly disagree 5. Strongly agree									
The course material ha	The course material handed out was adequate									
I. Strongly disagree 5. Strongly agree										
The instructors encouraged interaction and were helpful										
I. Strongly disagree	5. Strongly agree									
Were objectives of the	e course realized?	Υ	Ν							

Please give overall rating of the course

90% - 100%	(	)	60% - 70%	(	)
80% - 90%	(	)	50% - 60%	(	)
70% - 80%	(	)	below 50%	(	)

Please comment on the strengths of the course and the way it was conducted.

Please comment on the weaknesses of the course and the way it was conducted.

Please give suggestions for the improvement of the course.

Optional – Your name and contact address:

Thank you!!

