

# Dow University of Health Sciences



## REPRODUCTIVE SYSTEM II

### MODULE

### STUDY GUIDE 2023

### Fourth Year MBBS

**Dow University of Health Sciences      FOURTH YEAR MBBS**  
**Reproductive MODULE**

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## INTRODUCTION

### WHAT IS A STUDY GUIDE?

A study guide provides a focus for different educational activities in which the students are engaged. It equips students with information on the topic of study and assists in management of student learning. Furthermore, it imparts relevant information about the organization of the module and thus helps students organize their educational activities accordingly. Another important purpose of a study guide is the dissemination of information about rules and policies and teaching and assessment methods.

### HOW DOES A STUDY GUIDE HELP LEARNERS?

- Includes information on organization and management of the module.
- Advises the learners about representatives who can be contacted in case of need.
- Defines the outcomes and objectives which are expected to be achieved at the end of the module.
- Elaborates the teaching and learning strategies which will be implemented during the module.
- Inform learners about the learning resources in order to maximize their learning.
- Provides information about the assessment methods that will be held to determine every student's achievement of objectives.

### CURRICULUM MODEL:

Integrated modular curriculum is followed at Dow University of Health Sciences for MBBS program. This implies that instead of studying basic and clinical sciences separate and apart, students will experience a balanced and integrated combination of basic and clinical sciences in the form of a system –based modules.

The modular curriculum followed by Dow University of Health Sciences is integrated both in the vertical and the horizontal directions. However, in order to prepare the students for clinical teaching with a sound background knowledge of the basic sciences, the curriculum has been divided in three spirals.

The three spirals are:

1. Spiral -1 Basic Sciences
2. Spiral -2 Clinical Sciences
3. Spiral -3 Integrated Supervised Practical Training

The Basic Sciences Spiral is spread over the first two years and Clinical Sciences Spiral is distributed over the next two years. In the final year students are given practical hands-on training in the role similar to that of a shadow house officer. The whole curriculum is divided into modules, each module being related to a particular system. For example, Cardiovascular 1 module is in the Basic Sciences Spiral-1 and Cardiovascular 2 module is in the Clinical Sciences Spiral-2 and the relevant practical and clinical teaching/learning will be accomplished in Final year Spiral-3.

### **TEACHING & LEARNING METHODOLOGIES:**

The following teaching/ learning methods may be used to facilitate the learning process:

1. **Interactive Lectures:** Lectures are considered as an efficient means of transferring knowledge to large audiences.
2. **Small Group Discussion:** Small group discussion such as Demonstrations, tutorials and case- based learning (CBL) sessions facilitate interactive learning which helps students develop discussion skills and critical thinking.
3. **Practical:** Practical related to Basic Sciences are held to facilitate student learning.
4. **Skills:** Skills sessions are scheduled parallel with various modules at fully equipped Skills Lab and Simulation Lab in which students observe and learn skills relevant to the respective modules under guidance of Clinical Faculty.
5. **Self-Directed Learning (Self- Study):** Students have a measure of control over their own learning. They diagnose their needs, set objectives in accordance to their specific needs, identify resources and adjust their pace of learning

**5YEAR CURRICULAR ORGANIZATION**

Spiral	year	Modules				
First Spiral	I	<b>FND1- Foundation</b> Cell, Genetics & Cell Death (Basics of Anatomy, Physiology, Biochemistry, Gen. Pathology, Gen. Pharmacology, Community Medicine & Behavioral Sciences, <b>9 Weeks</b>		<b>HEM1- Blood Module</b> Immunity, Inflammation, Tissue repair, Antimicrobials & Neoplasia <b>9 Week</b>		
		<b>LCM1- Locomotion</b> Bones, Joints, Nerves & Muscles, 9weeks		<b>RSP1- Respiratory System</b> 6 weeks	<b>CVS1- Cardiovascular System</b> 4 weeks	
	II	<b>NEU1- Nervous System</b> 8 weeks		<b>HNN1- Head &amp; Neck &amp; Special</b> 6 weeks	<b>END1- Endocrinology</b> 5weeks	
		<b>GIL 1-GIT and Liver</b> 8 weeks		<b>EXC1- Renal and Excretory System</b>	<b>REP1- Reproductive System</b> 5 weeks	
Second Spiral	III	<b>Foundation 2</b> 2 wks	<b>IDD 1- Infectious diseases</b> 6 weeks	<b>HEM2- Hematology</b> 5 weeks	<b>RSP2- Respiratory System</b> 5 weeks	<b>CVS2- Cardiovascular System</b> 4 weeks
		<b>GIL 2-GIT and Liver (including Nutritional Disorders)</b> 8weeks			<b>EXC2- Renal &amp; Excretory System</b> 4 weeks	<b>END2- Endocrinology</b> 5 weeks
	IV	<b>ORT2- Orthopedics, Rheumatology, Trauma</b> 7 weeks		<b>PMR-Physical Medicine &amp; Rehabilitation</b> <b>DPS-Dermatology Plastic Surgery / Burns</b> <b>GEN-Genetics</b> 6 weeks		<b>REP2- Reproductive System</b> 8 Weeks
		<b>NEU2- Neurosciences and Psychiatry</b> 8 weeks			<b>ENT*</b> 4 weeks	<b>OPHTHALMOLOGY/EYE</b> 4 weeks
Third Spiral	V	Clinical Rotation 9:45 to 3:00 (with Ambulatory, Emergency, Intensive care) In Medicine, Pediatrics, Cardiology and Neurology units <ul style="list-style-type: none"> <li>▪ Lecture on problem based approach, twice a week</li> <li>▪ Ward tutorial twice a week</li> <li>▪ Student research presentation once a week</li> </ul>			Clinical Rotation 9:45 to 3:00 (Inpatient, Ambulatory, Emergency, Intensive care and Operation Theatres) In Surgery, Gynecology & Obstetrics, Orthopedics and Neurosurgery. <ul style="list-style-type: none"> <li>▪ Lecture on problem based approach, twice a week</li> <li>▪ Ward tutorial twice a week</li> <li>▪ Student research presentation once a week</li> </ul>	

**OVERVIEW**

<b>Program</b>	<b>MBBS</b>	
Year	Four	
Module Title	Reproductive	
Module Code	REP-2	
Contact Hours	100.5	
Duration	8 weeks	
	Anatomy	2
	Pathology	26
	Physiology	1
	Pharmacology	8.5
	Community Medicine	11.5
	Gynaecology & Obstetrics	38.5
	General surgery	3
	Paediatrics	10
Total Hours	100.5	

**INTEGRATED MODULE COMMITTEE**

<b>RESPONSIBILITIES</b>	<b>NAMES</b>	<b>DESIGNATION</b>	<b>EMAILS</b>
Chairperson Curriculum Committee, DUHS Chief Module coordinator	Prof. Naheed Khan	Prof. and Chairperson Anatomy	<a href="mailto:naheed.khan@duhs.edu.pk">naheed.khan@duhs.edu.pk</a>
Co- coordinator DMC	Dr Arisha Sohail	Assistant Professor Biochemistry	arisha.sohail@duhs.edu.pk
Co- coordinator DMC	Dr. Kanwal Naz	Lecturer Physiology	kanwal.naz@duhs.edu.pk
Coordinator DIMC	Dr Faryal Nawab	Assistant Professor Pazthology	dr.farnab@gmail.com

### **MODULE DESCRIPTION:**

This module has been designed for students to introduce them to the basic concepts of Anatomy, Pathology, Microbiology, Physiology Pharmacology Community Medicine Gynecology & Obstetrics General surgery Pediatrics. Lectures, tutorials, small group sessions including SBL and practical are important components of this module. History taking, as part of clinical skills, is included in this module. Your co-operative and teamwork abilities will be improved by working in different teams. You will be able to develop problem solving skills to apply your medical knowledge to practical situations by means of group and individual tasks. This study guide has been developed to assist you and keep you focused to achieve your goals.

Welcome to the Reproductive module and it is hoped that students will be able to achieve the desired module learning outcomes.

### **RATIONALE:**

A Student stepping into a medical school requires orientation, introduction to medical sciences with respect to health & disease. A student also needs certain guidelines to achieve goals to become a successful but ethical doctor in future. More than half of the population of Pakistan are females. Diseases related to female and male reproductive systems constitute a large segment of medical practice in all countries. These diseases together with pregnancy and its related disorders are the core teaching in this module. The importance of gynecology and obstetrics is well reflected in the curriculum as it will be revisited as a subject in the third spiral. The basic knowledge of anatomy, physiology, biochemistry, pharmacology and pathology has already been imparted in the first Reproduction module. In this second, clinical, spiral the student will develop further understanding of the pathology, clinical presentation, diagnosis and management of reproductive disorders, normal pregnancy and its disorders.

### **LEARNING OUTCOMES**

- Comprehensive understanding of the reproductive anatomy, physiology, and related hormonal regulation in both males and females.
- Analyze and diagnose common reproductive disorders, including their etiology, pathophysiology, clinical manifestations, and management.



- Evaluate and apply the latest evidence-based guidelines and research in reproductive medicine to make informed clinical decisions and treatments.
- Develop the ability to evaluate fertility issues and provide appropriate counseling regarding contraception options based on patient-specific factors.
- Demonstrate empathy and sensitivity towards patients dealing with reproductive health issues, understanding the emotional and psychological aspects associated with infertility, pregnancy loss.
- Prioritize patient education, ensuring individuals and couples are well-informed about reproductive health options, risks, benefits, and actively involve them in the decision-making process, respecting their autonomy and preferences.

### **DISCIPLINE-WISE LEARNING OBJECTIVES AND CONTENTS**

#### **PATHOLOGY**

##### **Learning Objectives:**

- Describe the characteristics of developmental disorders of the male and female reproductive system.
- Enlist and describe the sexually transmitted infections among males and females.
- Describe the disorders related to early pregnancy and pathophysiology of Rh incompatibility.
- Describe the features of major non-neoplastic and neoplastic disorders of the lower FGT.
- Describe the pathophysiology and clinical features of the major non-neoplastic and neoplastic disorders of the uterus and ovaries.
- Characterize the non-neoplastic and neoplastic disorders of the Male Genital Tract.
- Describe the non-neoplastic and neoplastic disorders of the breast

##### **Topics/ Contents:**

##### **Lectures: (1 hour each)**

1. Developmental Disorders of MGT and FGT
2. Early Pregnancy Disorders
3. STL1 in Females
4. Pathophysiology of Endometrial Hyperplasia
5. Infections and Pre-invasive Lesions of FGT: VIN, VAIN, CIN

6. Non-Neoplastic and Neoplastic Lesions of Lower FGT
7. STI and their Complications in Females
8. Neoplastic Disorder of MGT
9. Tumors of Uterine Corpus and Endometrium
10. Non-Neoplastic Lesions of Ovary
11. Carcinoma of the Prostrate
12. Tumors of Ovary-1
13. Tumors of Ovary-2
14. Mastitis, Duct Ectasia, Fat Necrosis, Non-Proliferative and Proliferative Breast Disorders
15. Risk Factors and Classification of Breast Tumors
16. Disorders of Placentation, Pre-Eclampsia, and Eclampsia
17. Pathophysiology of Rh Incompatibility

**Practical/Tutorials: (1.5 Hour each)**

1. Hydatiform Mole Practical
2. Endometrial Hyperplasia Practical
3. Gross Pathology Museum: Ovarian Tumors Museum
4. Gross Pathology Museum: Breast Pathology Museum
5. Gross Pathology Museum: Uterine Tumors Museum
6. Lower FGT Tumors Tutorial

**PHARMACOLOGY**

**Learning Objectives:**

- Enlist the different estrogen & progestin preparations and describe their pharmacologic effects, clinical uses and their major toxicities
- Understand the benefits and hazards of hormonal contraceptives
- Describe the uses of gonadal hormones and their antagonists in the treatment of cancer in women & men
- Identify the benefits & hazards of postmenopausal estrogen therapy
- Name two SERMs & describe their unique properties.

**Topics/Contents:**

**Lectures: (1 hour each)**

- 1- Male sex hormones
- 2- Estrogen & anti-estrogen
- 3- Progestin & anti-progestin
- 4- Oral contraceptives

**Tutorials: (1.5 hour each)**

- 1- Gonadal pharmacology
- 2- Oral contraceptives
- 3- Internal evaluation

**COMMUNITY MEDICINE.**

**Learning Objectives:**

- Define pillars of Safe Motherhood
- Analyze social obstetric care and safe motherhood initiative in Pakistan
- Evaluate maternal mortality in context of Pakistan (Mrs. X; three delays model etc.)
- Define various indicators of maternal and child health
- Recognize the significance of Child spacing and family planning in context of Pakistan.
- Advise appropriate methods of contraception.
- Appreciate the importance immunization, breastfeeding, and IMNCI strategies in reducing infant and child mortality
- Evaluate the importance of immunization for maintenance of health.
- Advise vaccine schedule according to EPI Pakistan.
- Examine the significance of Baby friendly hospital Initiative
- Plot on growth charts [Weight for Age (WFA), Height for Age(HFA)] for growth monitoring of children under five years
- Manage common childhood illnesses according to IMNCI.

**Topics/Contents:**

**Lectures: (1 Hour each)**

1. Expanded program on Immunization
2. MCH (maternal & child health) Indicators

3. IMNCI- I
4. IMNCI- II
5. Safe motherhood Initiative
6. Breast feeding. Baby friendly hospital Initiative
7. Maternal mortality (Mrs. X; three delays model etc.)

**Tutorials: (1.5 hour each)**

1. Family planning and contraception
2. Growth monitoring and plotting on growth charts
3. IMNCI

**ANATOMY****Learning Objectives:**

- Describe female genital organs.
- Identify supports of ovaries & uterus.
- Discuss ovarian cycle & oogenesis.
- Describe male genital organs.
- Discuss role of testosterone hormone.
- Enlist composition & functions of semen

**Topics/Contents:****Lectures: (1 Hour each)**

1. Revisit of Female genital system
2. Revisit of male genital system

**PHYSIOLOGY****Learning Objectives:**

- Define menstrual cycle.
- Describe the physiologic changes that occur in the female reproductive organs during the menstrual cycle.
- Explain the regulation of menstrual cycle.
- Express the applied physiology

**Topics/Contents:**

**Lectures: (1 Hour each)**

1. Revisit of Menstrual Cycle

**GYNAECOLOGY & OBSTETRICS**

**Learning Objectives:**

- Demonstrate knowledge of anatomy & physiology of male & female reproductive tract
- Demonstrate knowledge of preconception care.
- Explain the normal physiologic changes during pregnancy.
- Describe common problems in pregnancy (early pregnancy, medical disorders & Antenatal care).
- Describe and Demonstrate knowledge of intrapartum care of normal & abnormal pregnancy.
- Describe the obstetrical complications & emergencies with principles of prevention, early identification & management
- Describe knowledge of postpartum care of mother and newborn including breast feeding, assessment of resp distress, newborn resuscitation.
- Describe principles of newborn vaccinations & EPI
- Describe the understanding of maternal & perinatal mortality & SDGs.
- Describe menstrual cycle physiology, discuss puberty and menopause.
- Explain abnormal uterine bleeding.
- Describe etiology and evaluation of subfertility.
- Describe different methods of Contraception and counselling.
- Describe the knowledge of common benign gynecologic conditions.
- Enumerate differential diagnosis for the acute abdomen and chronic pelvic pain, STIs & PID.
- Describe gynecological malignancies including risk factors, signs & symptoms and initial evaluation and screening e.g Pap smear
- Explain clinical features, diagnosis & management of testicular tumours
- Explain the knowledge of common gynecological & obstetric procedures.

**Topics/Contents:**

**Lectures: (1 Hour each)**

2. Ectopic Pregnancy
3. STIs & PID in female
4. Contraception
5. Pathophysiology of menstrual cycle AUB, DUB
6. Primary Amenorrhea
7. Dysmenorrhea, PMS
8. Hirsutism /Virilisation
9. Menopause & HRT
10. Etiology and investigation of infertility (interpretation of semen report)
11. Management of infertility
12. Management of Ca cervix
13. Benign and Malignant tumors of Vulva
14. Benign Tumors of Uterine corpus
15. Diagnosis and management of pre invasive lesions of vagina and cervix
16. Ovarian tumors
17. Clinical diagnosis and management of fibroids, adenomyosis endometriosis
18. Pelvic organ prolapse
19. Prenatal diagnosis: non-invasive and invasive
20. Safe motherhood and MDGs
21. Urinary and Fecal incontinence
22. Malpresentation and malposition
23. Obstetrical emergency
24. High risk pregnancy
25. Abnormal labour & CPD
26. Amniotic fluid abnormalities
27. Purperrium: Normal & Abnormal
28. Minor and major surgical procedure
29. Multiple Pregnancy

30. IUGR, IUD

31. Breech vaginal delivery

32. Instrumental vaginal delivery including LSCS

**SBLs (1.5 hour each)**

- 1- Ectopic Pregnancy
- 2- AUB
- 3- PCOS
- 4- Subfertility
- 5- Endometriosis

**PAEDIATRICS**

**Learning Objectives:**

- The student will require to achieve the basic knowledge and clinical competencies related to common problems related to reproductive and neonatal health.
- The student should be able to do neonatal examination and assessment of gestational age.
- The students should be able to understand and describe steps of neonatal resuscitation.
- The student should be able to understand , causes , clinical signs and symptoms and complications of common early and late neonatal diseases, including, infant of diabetic mother, neonatal sepsis, birth asphyxia(HIE), respiratory distress in new born, prematurity, neonatal jaundice and IUGR.
- The student should be able to understand routine laboratory tests related to the common diseases in neonates.
- The student should be able to take a good detailed history of a patient with neonatal health problems in all settings like inpatient, nursery and well-baby clinics in outpatient department.
- The student should be able, to perform a general physical and systemic examination of a neonate, with common illnesses like, neonatal sepsis, respiratory distress, birth asphyxia, and infant of diabetic mother.
- The student should be able, to make differential diagnoses and most probable diagnosis.
- The student should be able to understand, essential management plan and counselling of mothers/attendant for common neonatal illnesses and problems.
- .The student should be able, to understand and able to do counselling of mothers/parents/attendant regarding problems associated with breast feeding and lactation in neonates.

- The student should be able to understand and describe the normal puberty and disorders related to puberty.
- The student should be able to participate in the research, related to neonatal and reproductive health problems.
- The student should be able, to do self-learning and participate in continuous medical education.

**Topics/Contents:**

**Lectures: (1 Hour each)**

- 1- Infant of Diabetic Mother
- 2- Neonatal Sepsis
- 3- Birth Asphyxia
- 4- Neonatal Resuscitation
- 5- Respiratory Distress in New Born
- 6- Breast Feeding and Lactation
- 7- Prematurity
- 8- Neonatal Jaundice
- 9- Clinical Presentation Complications and Management of IUGR Baby
- 10- Puberty and Disorders of Puberty

**GENERAL SURGERY**

**Learning Objectives:**

- Enlist STIs caused by various organisms.
- Describe the pathogenesis of STIs of MGT.
- Enlist relevant lab. Diagnostic tests
- Discuss management and treatment of STIs.
- Describe classification of testicular tumors.
- Describe morphology of different testicular tumors.
- Describe Clinical features of germ cell testicular tumors.
- Describe Clinical staging of testicular tumours markers.



- Establish Diagnosis and management of testicular tumors.
- Describe Normal anatomy of breast.
- Describe Lymphatic drainage of breast.
- Describe Classification of breast tumors
- Explain Grading and staging of breast tumors.
- Differentiate b/w benign and malignant lesions with common presentations
- Different modalities and treatment options for these lesions.

**Topics/Contents:**

**Lectures: (1 Hour each)**

- 1- STIs in males: MGT including Epididymitis orchitis, prostatitis
- 2- Testicular tumors management
- 3- Diseases of Breast diagnosis and management

**SKILL LAB**

**Learning Objectives:**

- 1- Demonstrate the proper technique of clinical breast examination.
- 2- Demonstrate the examination of axillary and supraclavicular lymph nodes.
- 3- Identify the findings in following abnormalities.
  - a) Fibro adenoma
  - b) Carcinoma

**Topics/Contents (1.5 hr)**

Examination of breast

**The contents are subjected to be altered according to requirement of academic calendar**

**LEARNING RESOURCES**

**PATHOLOGY**

- Robbins Basic Pathology Kumar & Abbas 10th Edition
- Robbins & Cotran Pathologic Basis Of Disease Kumar & Abbas & Aster 10th Edition

**COMMUNITY MEDICINE**

- Public Health And Community Medicine Shah, Ilyas, Ansari 7th Edition

**PHARMACOLOGY**

- Lippincott's Illustrated Review Pharmacology Karen Whalen 6th Or Latest Edition
- Basic And Clinical Pharmacology Bertram G. Katzung 11th Edition

**FORENSIC MEDICINE**

- Principles And Practice Of Forensic Medicine Nasib R.Awan 1 St Edition

**MEDICINE**

- Principles & Practice Of Medicine Davidson's 22nd Or Latest Edition
- Essentials Of Kumar And Clark's Clinical Medicine Kumar & Clark 9th Or Latest Edition
- Macleod's Clinical Examination Douglas & Nicol & Robertson 13th Or Latest Edition
- Hutchison's Clinical Methods William M Drake & Michael Glynn 23rd Or Latest Edition

**PAEDIATRICS**

- Nelsons's Essentials Of Pediatrics Marc dante & Kliegman 7th Or Latest Edition

**ASSESSMENT**

Assessment will be done in two parts:

**At the end of module**

- Module Exam (Theory) -20%
- Module Exam Practical Internal Evaluation- 20%

**At the end of Year**

- Annual Exam (Theory) -80%
- Annual Exam (ospe, Viva)-80%

MCQs (Multiple choice questions), OSCE (Objective Structured Clinical Exam) and structured vivas will be the main assessment tool.