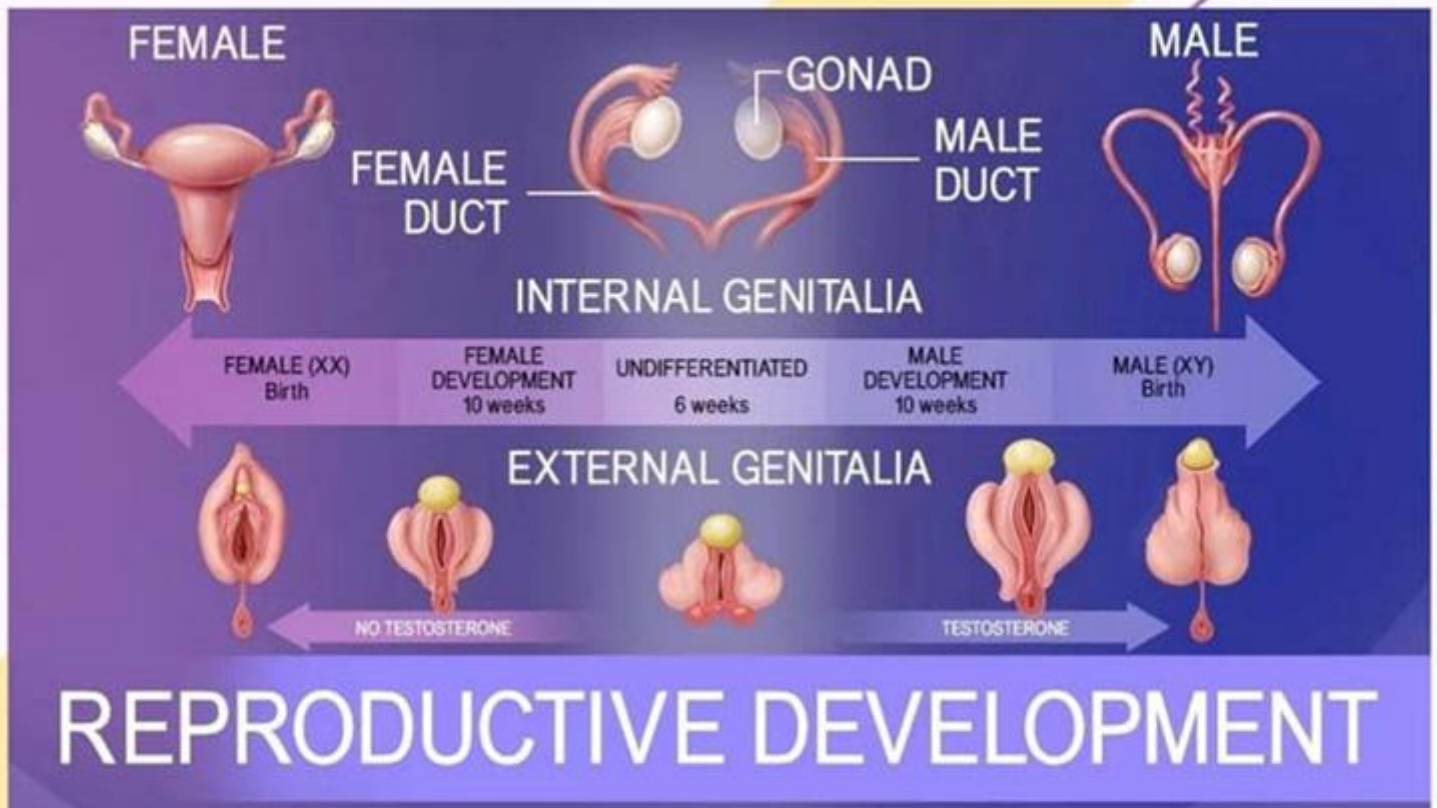


STUDY GUIDE-2ND YEAR MBBS

5th AUGUST - 4th September 2024

Duration 5 Week

REPRODUCTIVE MODULE I



STUDY GUIDE FOR REPRODUCTIVE SYSTEM MODULE-I

S.No	CONTENTS	Page No
1	Overview	3
2	Introduction to Study Guide	4
3	Learning Methodologies	5
4	Module: Reproductive System-I	7
4.1	Importance of the Reproductive System	7
4.2	Objectives and Learning Strategies	8
5	Learning Resources	16
6	Assessment Methods	17
7	LNMC Examination Rules and Regulations	18
8	Schedule	19

Module name: Reproductive System-I Year: Two Duration: 5 weeks (August-September 2024)

Timetable hours: Interactive Lectures, Case-Based Learning (CBL), Self-Study, Practicals, Skills, Demonstrations

MODULE INTEGRATED COMMITTEE

MODULE COORDINATOR:	<ul style="list-style-type: none"> Prof. Saima Athar (Anatomy)
CO-COORDINATORS:	<ul style="list-style-type: none"> Dr. Sadia Qayyum (Forensic Medicine)

DEPARTMENT RESOURCE PERSONS

BASIC HEALTH SCIENCES	CLINICAL AND ANCILLARY DEPARTMENTS
ANATOMY <ul style="list-style-type: none"> Professor Zia-ul-Islam 	GYNAE/OBSTETRICS <ul style="list-style-type: none"> Dr. Aisha Taj
BIOCHEMISTRY <ul style="list-style-type: none"> Professor Faiza Waseem 	MEDICINE <ul style="list-style-type: none"> Prof. Dr. Karim Ullah Makki
COMMUNITY MEDICINE <ul style="list-style-type: none"> Dr. Saima Zainab 	RESEARCH & SKILLS DEVELOPMENT CENTER <ul style="list-style-type: none"> Dr. Kahkashan Tahir
MICROBIOLOGY <ul style="list-style-type: none"> Professor Shaheen Sharafat 	
MOLECULAR PATHOLOGY <ul style="list-style-type: none"> Dr. Sobia Rafiq 	
PATHOLOGY <ul style="list-style-type: none"> Professor Naveen Faridi 	
PHARMACOLOGY <ul style="list-style-type: none"> Professor Tabassum Zehra 	
PHYSIOLOGY <ul style="list-style-type: none"> Professor Syed Hafeezul Hassan 	
DEPARTMENT of HEALTH PROFESSIONS EDUCATION	
<ul style="list-style-type: none"> Professor Nighat Huda Professor Sobia Ali Dr. Afifa Tabassum Dr. Yusra Nasir 	
LNH&MC MANAGEMENT	
<ul style="list-style-type: none"> Professor K.U. Makki, Principal LNH&MC Dr. Shaheena Akbani, Director A.A & R.T LNH&MC 	
STUDY GUIDE COMPILED BY: Department of Health Professions Education	

INTRODUCTION

WHAT IS A STUDY GUIDE?

It is an aid to:

- Inform students how the student learning program of the module has been organized
- Help students organize and manage their studies throughout the module
- Guide students on assessment methods, rules, and regulations

THE STUDY GUIDE:

- Communicate information on the organization and management of the module. This will help the student to contact the right person in case of any difficulty.
- Define the objectives which are expected to be achieved at the end of the module.
- identifies the learning strategies such as Interactive Lectures, small group teachings, clinical skills, demonstrations, tutorials, and case-based learning that will be implemented to achieve the module objectives.
- Provide a list of learning resources such as books, computer-assisted learning programs, web- links, and journals, for students to consult to maximize their learning.
- Highlights information on the contribution of continuous and semester examinations on the Students' overall performance.
- Includes information on the assessment methods that will be held to determine every student's Achievement of objectives.
- focuses on information about examination policy, rules, and regulations.

CURRICULUM FRAMEWORK

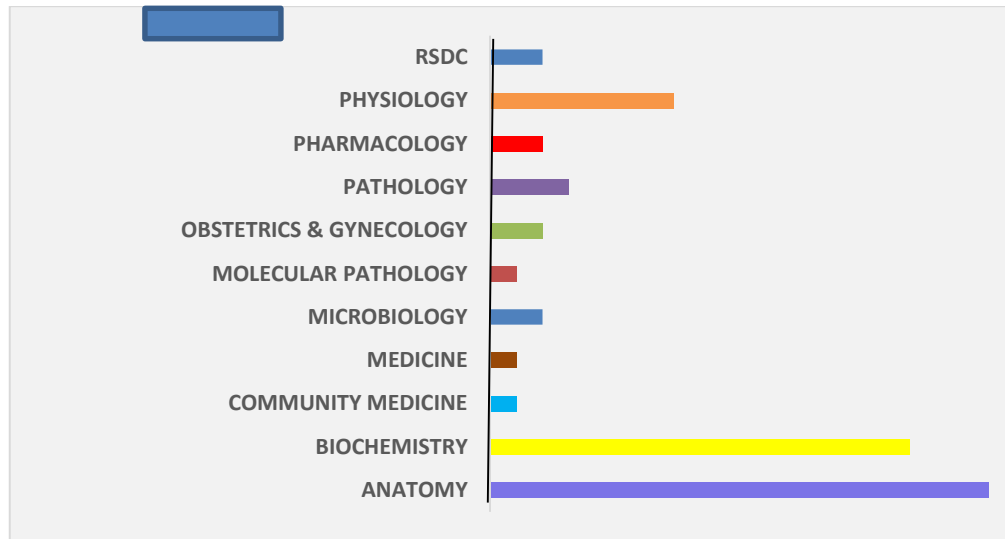
Students will experience an *integrated curriculum* in the modules at LNMC per the JSMU guidelines theatre and the most recent developments that impact individual health.

INTEGRATED CURRICULUM:

Comprises of system-based modules such as Head and Neck, Neurosciences and Endocrinal orgy, and Reproductive System-I which link basic science knowledge to clinical problems. Integrated teaching means that subjects are presented as a meaningful whole. Students will be able to have a better understanding of basic sciences when they repeatedly learn about clinical examples.

Case-based discussions, computer-based assignments, and early exposure to clinics, wards, and skills acquisition in the ill's lab and physiotherapy department are characteristics of the integrated teaching program.

INTEGRATING DISCIPLINES OF REPRODUCTIVE SYSTEM-I MODULE



LEARNING METHODOLOGIES

The following teaching/learning methods are used to promote better understanding:

- Interactive Lectures
- Small Group Discussion
- Case- Based Learning
- Practical
- Skills session
- Self-Study

INTERACTIVE LECTURES:

In large groups, the Lecturer introduces a topic or common clinical conditions and explains the underlying phenomena through questions, pictures, videos of patient interviews, exercises, etc. Students are actively involved in the learning process.

SMALL GROUP DISCUSSION (SGD): This format helps students to clarify concepts and acquire skills or attitudes. Sessions are structured with the help of specific exercises such as patient cases, interviews, or discussion topics. Students exchange opinions and apply knowledge gained from Interactive Lectures, tutorials, and self-study. The facilitator's role is to ask probing questions, summarize, or rephrase to help clarify concepts.

CASE-BASED LEARNING: A small group discussion format where learning is focused on a series of questions based on a clinical scenario. Students answer the questions by applying relevant knowledge gained in clinical and basic health sciences during the module.

PRACTICAL: Basic science practical's related to anatomy, biochemistry, pathology, pharmacology, and physiology are scheduled for student learning.

SKILLS SESSION: Skills relevant to the respective module are observed and practiced where applicable in the skills laboratory or Department of Physiotherapy.

SELF-STUDY: Students assume responsibility of heir learning through individual study, sharing and discussing with peers, and seeking information from Learning Resource Center, teachers, and resource persons within and outside the college. Students can utilize the time within the college's scheduled hours of self-study.



Apart from attending daily scheduled sessions, students too should engage in self-study to ensure that all the objectives are covered.

MODULE: REPRODUCTIVE SYSTEM

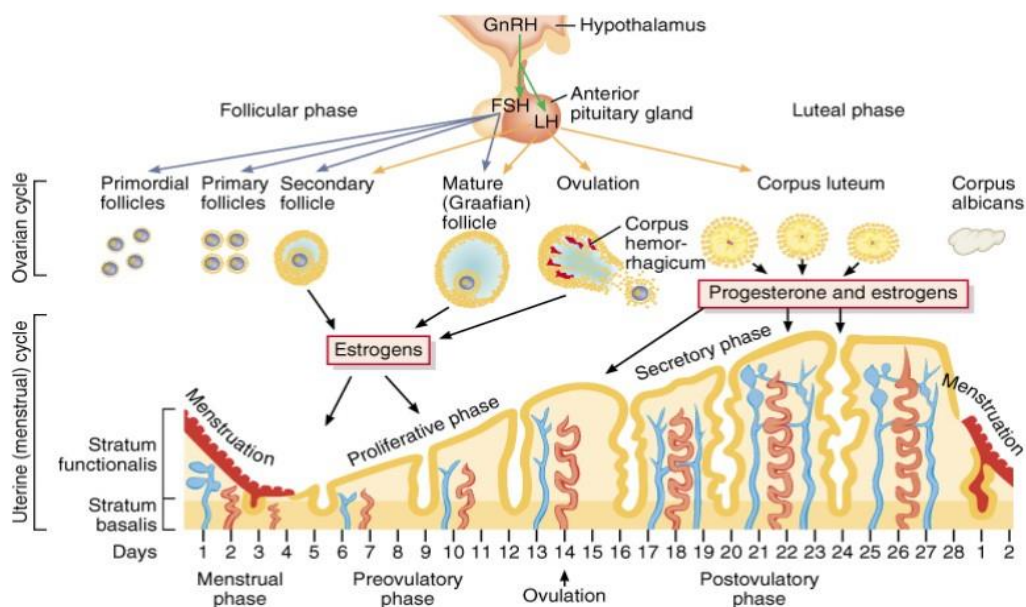
IMPORTANCE:

The module focuses on integrating basic health sciences into clinical medicine. It will be taught in a combination of lectures, tutorials, small group learning sessions, practical and skills classes, and possibly visits to clinical wards. The module will explore the normal as well as the abnormal physiology of the male and female reproductive system. Students will be introduced to a variety of pathologies to facilitate a better understanding of how the reproductive system is impacted by diseases. It will give the road overview of the system. The module will also address reproductive hormonal changes associated with different stages of life correlating pathophysiology with clinical presentation. This will extend students' integrative abilities. Video and hands–sessions on basic examination skills will enhance students' understanding of the subject/topic.

AIMS OF THIS MODULE:

The module aims to provide:

- Knowledge and understanding of the structures and functions of the reproductive system and how it responds to changing metabolic needs of the body, organs, and, tissues, revealing the relevance of such knowledge to clinical practice.
- Knowledge and understanding of the origin and associated risk factors of common diseases of the reproductive system.
- Knowledge and prevention of common hormonal disorders associated with the reproductive system.
- Practice basic skills used in testing the function of this system in a simulated clinical setting.
- Knowledge of drugs used to treat reproductive system diseases.



COURSE TOPICS, OBJECTIVES, AND STRATEGIES

At the end of the module the students will be able to:

ANATOMY

OBJECTIVES	LEARNING STRATEGY
1. Pelvis and its types (Sacrum + Joints of Pelvis)	Tutorial / Interactive Lecture / Practical
• Discuss the features of a bony pelvis	
• Describe the boundaries of the pelvic inlet & outlet	
• Differentiate between the male and female pelvis	
• Discuss the important points of pelvimetry	
• Explain the types, articulations, ligaments, relations, and movements of joints of the pelvis	
• List factors providing stability to the joints of the f pelvis	
• Dural venous sinuses	
• Male and female bony pelvis	
2. Osteology of Sacrum	
• Discuss the osteology of sacrum	
• List the muscles and ligaments attached to the o sacrum	
3. Pelvic Boundaries	
• Describe the anatomy of the pelvic walls	
• Enumerate the muscles of the pelvic floor/pelvic diaphragm	
• Discuss the attachment & actions of muscles in the f pelvic floor/pelvic diaphragm	
• Discuss the blood supply, nerve supply & lymphatic drainage of pelvic floor muscles	
• Describe the attachment & significance of pelvic fascia	
• Discuss the clinical conditions associated with the pelvic floor & fascia	
• Discuss the role of the pelvic floor in urinary and fecal continence	
4. Pelvic Malformations	Interactive Lecture
• Discuss pelvic malformations in males and females	
5. Blood supply, venous and lymphatic drainage of the pelvis	
• Describe the blood supply, nerve supply & lymphatic drainage of the pelvis	
6. Testis, Epididymis and Scrotum	
• Describe the anatomy of the testis	
• Describe the anatomy of the f Ductus Deferens, Epididymis & Ejaculatory duct	
• Describe the histological features of the testis and epididymis	
7. Pelvic peritoneal reflections in male & female	
• Describe pelvic reflections in males and females	
8. Perineum: division, spaces, and urogenital region	
• Describe the gross anatomical features of the perineum	
• List the boundaries of the f perineum	
• Discuss the blood supply, nerve supply and lymphatic drainage of the perineum	

<ul style="list-style-type: none"> Describe the male urogenital triangle and its contents 	Interactive Lecture /Small Group Session
<ul style="list-style-type: none"> Describe the gross anatomy, blood supply, nerve supply and lymphatic drainage of the male urethra 	
<ul style="list-style-type: none"> Discuss the clinical conditions associated with the penis & male urethra 	
<ul style="list-style-type: none"> Describe the female urogenital triangle and its contents 	
9. Perineum: Anal triangle, Anal canal and ischiorectal Fossa	
<ul style="list-style-type: none"> Describe the division of the f perineum into anal and urogenital triangles 	
<ul style="list-style-type: none"> Discuss the boundaries and features of the f anal triangle 	
<ul style="list-style-type: none"> Discuss the importance of the of pectineal line concerning the vasculature and lymphatic drainage of the rectum and anal canal 	
10. Nerves of pelvis s, perineum, and sacral plexus	
<ul style="list-style-type: none"> Enumerate the nerves innervating the pelvis 	
<ul style="list-style-type: none"> Describe the Sacral plexus and its formation 	Interactive Lecture /Practical
<ul style="list-style-type: none"> Describe the branches and divisions of the sacral plexus 	
<ul style="list-style-type: none"> Discuss coccygeal plexus 	
<ul style="list-style-type: none"> Describe hypogastrictria plexus, its location, form, time, and branches 	
<ul style="list-style-type: none"> Discuss the injuries associated with the nerves of the pelvis, perineum, and sacral plexus 	
11. Prostate, Seminal vesicles & Bulbourethral glands	
<ul style="list-style-type: none"> Describe the gross features of the following male internal organs: 	
i. Prostate gland	
ii. Seminal Vesicles	
iii. Ductus deference	
iv. Bulbourethral glands	
<ul style="list-style-type: none"> Discuss their location, relations, blood supply, nerve supply & lymphatic drainage. 	
<ul style="list-style-type: none"> Discuss the clinical conditions associated with h prostate gland, seminal vesicles & bulbourethral glands 	
<ul style="list-style-type: none"> Describe the histological features of the prostate, seminal vesicle, and bulbourethral gland 	
12. Development of the male reproductive system and Spermatogenesis	Interactive Lecture
<ul style="list-style-type: none"> Describe the process of spermatogenesis 	
<ul style="list-style-type: none"> List the timeline of the development of the le reproductive system 	
<ul style="list-style-type: none"> Describe the process of development of parts of the f of the reproductive system 	
<ul style="list-style-type: none"> Discuss the development of male external genitalia 	
<ul style="list-style-type: none"> Discuss the congenital anomalies of the male genital system 	
i. Cryptorchidism (un-descended testes)	
ii. Hypospadiasis and other malformation of the urethra	
<ul style="list-style-type: none"> Gross anatomy of Male external genitalia & Spermatic cord 	Interactive Lecture/ Small Group Session
13. Gross anatomy of the female genital tract, Ovary & Fallopian tube	
<ul style="list-style-type: none"> State the location the of ovary & fallopian tube 	
<ul style="list-style-type: none"> Describe the parts & functions of fallopian tube 	
<ul style="list-style-type: none"> Explain the ligaments of the ovary & fallopian tube 	
<ul style="list-style-type: none"> Describe the blood supply, nerve supply & lymphatic drainage of ovary & fallopian tube 	
<ul style="list-style-type: none"> Discuss the clinical correlates of ovary & fallopian tube 	
<ul style="list-style-type: none"> Describe the histological features of the ovary & fallopian tube 	

<ul style="list-style-type: none"> Discuss Perineal pouches & contents 	
14. Gross anatomy of Uterus, Cervix & Vagina	Interactive Lecture/Case-Based Learning/ Small Group Session /
<ul style="list-style-type: none"> List the parts of the uterus, cervix & vagina 	
<ul style="list-style-type: none"> Describe the location & relations of the uterus, cervix, and vagina with surrounding structures 	
<ul style="list-style-type: none"> Describe the ligaments of the uterus 	
<ul style="list-style-type: none"> Discuss the blood supply, nerve supply & lymphatic drainage of uterus, cervix & vagina 	
<ul style="list-style-type: none"> Describe the histological features of the uterus, cervix, and vagina 	
<ul style="list-style-type: none"> Discuss the clinical conditions associated with the uterus, cervix and vagina 	
15. Development of the Female reproductive system	
<ul style="list-style-type: none"> Discuss the primordial germ cells, their precursors, and migration 	
<ul style="list-style-type: none"> Describe the location and division of genital ridges 	
<ul style="list-style-type: none"> Describe the development of female genital ducts 	
<ul style="list-style-type: none"> Discuss the development and differentiation of Paramesonephric ducts and the development of the uterus and vagina 	
<ul style="list-style-type: none"> Discuss the congenital anomalies associated with the female reproductive system 	
16. Histology of testes and duct system	Practical / Small group discussions
<ul style="list-style-type: none"> List the male reproductive organs 	
<ul style="list-style-type: none"> Describe the histological features of the testes and male genital duct system 	
<ul style="list-style-type: none"> Describe the histology of seminiferous tubules, Sertoli cells, spermatozoa, leydig cells, rete testis, and epididymis 	
<ul style="list-style-type: none"> Identify the histological features of the testis and duct system under a light microscope 	
17. Histology of Prostate, Seminal vesicles & Bulbourethral glands	
<ul style="list-style-type: none"> Identify the histological features of the following, under the light microscope: 	
i. Prostate gland	
ii. Seminal Vesicle	
iii. Bulbourethral glands	
18. Histology of ovary & fallopian tube	
<ul style="list-style-type: none"> Identify the histological features of the ovary (follicles in different stages) 	
<ul style="list-style-type: none"> Identify layers of different parts of fallopian tubes under a light microscope 	
<ul style="list-style-type: none"> Explain the microscopic features of the Ovary and Fallopian tube 	
19. Histology of Uterus, Cervix & vagina	
<ul style="list-style-type: none"> Identify the histological features of: 	
i. Walls of the uterus; perimetrium, myometrium, endometrium	
ii. Lining epithelium of the uterus	
<ul style="list-style-type: none"> Identify the histological features and parts of the f cervix & vagina under a light microscope 	
<ul style="list-style-type: none"> Explain the microscopic features of the Uterus, Cervix & vagina 	
20. Gross And Microscopic Anatomy Of Mammary Glands	Interactive Lecture
<ul style="list-style-type: none"> Discuss the gross and microscopic anatomy of mammary glands. 	

BIOCHEMISTRY

OBJECTIVES	LEARNING STRATEGY
1. Male Sex Hormones	Interactive Lecture/ Tutorial/Case-Based Learning
• List the male sex hormones	
• Discuss the production of male sex hormones	
• Explain the synthesis, chemical structure, mechanism of action, and metabolic functions of male sex hormones	
• Discuss the hypothalamic-pituitary axis of male sex hormones	
• Discuss the regulation and feedback mechanism of male sex hormones	
• Describe the clinical diseases and complications associated with male sex hormones	
• Discuss the clinical importance of Male Sex hormones (e.g. Infertility)	
• Interpret relevant clinical conditions correlated with their laboratory investigations	
2. Female sex hormones	
• List the female sex hormones	
• Discuss the production of female sex hormones	
• Explain the synthesis, chemical structure, mechanism of action, and metabolic functions of female sex hormones	
• Discuss the hypothalamic-pituitary axis of female sex hormones	
• Discuss the regulation of female sex hormones and the feedback mechanism	
• Describe the clinical diseases and complications associated with female sex hormones	
3. Pituitary Hormone and Menstrual Cycle	Interactive Lecture
• Explain the biochemical functions of the female reproductive system	
• Discuss hormonal regulation (the hypothalamic-pituitary-ovarian axis) during prepuberty, puberty, and menopause	
• Describe the menstrual cycle (Ovarian and uterine cycles)	
• Discuss the three phases of the ovarian cycle (Follicular, Ovulation, and Luteal)	
• Discuss the three phases of the uterine cycle (Menstrual, Proliferative, and Secretory)	
• Explain the hormonal changes at menarche and menopause	
• Discuss the clinical abnormalities of the menstrual cycle and its biochemical investigations	
4. Biochemical changes during menopause	
• Define menopause	
• Discuss the hormonal and biochemical changes during menopause	
• Discuss the clinical conditions associated with menopause	
• Describe the types of amenorrhea	
5. Biochemical role of the Placenta	
• List the placental hormones	
• Discuss the cells type and production of placental hormones	
• Explain the synthesis, chemical structure, mechanism of action, and metabolic functions of placental hormones	

<ul style="list-style-type: none"> • Discuss the hypothalamic-pituitary axis of placental hormones • Discuss the regulation of placental hormones and feedback mechanism • Describe the clinical conditions associated with placental hormones and their lab investigations 		
6. Amniotic fluid Analysis	Tutorial	
<ul style="list-style-type: none"> • Discuss the normal composition of amniotic fluid • List the biochemical markers of fetal development • Discuss the functions of amniotic fluids • Describe the clinical conditions associated with amniotic fluid • Discuss the laboratory investigations of amniotic fluid 		
7. Structure of DNA & RNA		Interactive Lecture/ Tutorial/Case-Based Learning
<ul style="list-style-type: none"> • Explain the central dogma of molecular biology • Describe the biochemical structure, types, and functions of DNA and RNA • Discuss briefly the genetic disorders 		
8. DNA Replication		
<ul style="list-style-type: none"> • Define Replication • Classify the types of replication in prokaryotes and eukaryotes • Describe the steps of DNA Replication • Discuss the disorders related to DNA replication and repair (e.g. Xerodermapigmentosa and radiation damage) 		
9. Transcription	Interactive Lecture	
<ul style="list-style-type: none"> • Define Transcription • Explain the process of Transcription in Prokaryotes • Describe the mechanism of transcription in Eukaryotes • Discuss the process of Post transcription modification (mRNA, tRNA, and rRNA) • Explain the retroviruses of cancers and AIDS and the effects of drugs 		
10. Translation		
<ul style="list-style-type: none"> • Define Translation • Explain the genetic code, codon, and wobble hypothesis • Explain the process of Translation • Discuss the inhibitors of protein synthesis • Discuss the process of Post translation modification • Describe the different types of mutations 		
12. Menstrual abnormalities		Tutorial
<ul style="list-style-type: none"> • Discuss the clinical importance of menstrual cycle abnormalities • Interpret relevant clinical conditions correlated with their laboratory investigations 		
13. Amniocentesis		
<ul style="list-style-type: none"> • Discuss the clinical importance of amniocentesis • Interpret relevant clinical conditions correlated with their laboratory investigations 		
14. Mutations		
<ul style="list-style-type: none"> • Discuss the clinical importance of mutations (e.g. sickle cell anemia etc.) • Interpret relevant clinical conditions correlated with their laboratory investigations 		
15. Pregnancy test	Practical	

• Outline the methods for the performance of pregnancy test	
• Explain the principle of the HCG one-step pregnancy test	
• Perform urine pregnancy test by using a dipstick (β -HCG levels)	
• Interpret relevant clinical conditions correlated with their laboratory investigations	
16. Polymerase Chain Reaction (PCR)	
• Explain the principle and procedure of PCR	
• Describe the applications of PCR	
• Interpret relevant clinical conditions correlated with their laboratory investigations	

COMMUNITY MEDICINE

OBJECTIVES	LEARNING STRATEGY
CHS family planning & its Bio psychosocial framing	Lecture / Tutorial
• Describe the basic concept of the family planning method	
• Outline the importance of family planning.	
• Discuss Public Health aspect of reproductive Health	
• Discuss Nutrition in Adolescents	

MEDICINE

OBJECTIVES	LEARNING STRATEGY
COVID in pregnancy	Interactive Lecture / Practical
• Discuss the sign & symptoms of pregnant females with Covid-19	
• Discuss the complications of Covid-19 infections in pregnant female	
• Explain the importance of maternal and fetal Outcomes in Covid-19 infection	
• Discuss the management and prevention of Covid-19 in pregnant females	
• Discuss the importance of Community Based Services	
• Outreach center visit	
• Visit to Senior Citizen Primary Care Center LNH	

MICROBIOLOGY

OBJECTIVES	LEARNING STRATEGY
Infection prevention & control	Interactive Lecture
• List the types of vaccines that can be administered during pregnancy	
• Discuss the mechanism of action of various vaccines	
• Discuss the possible side effects of vaccines	
Microorganisms causing diseases in Pregnancy	
• Describe infections caused by Pathogens that affect the baby in intra-uterine life	
• Pathogens causing fetal abnormalities during pregnancy	

MOLECULAR PATHOLOGY

OBJECTIVES	LEARNING STRATEGY
Mutations	Interactive Lecture
• Define key terms associated with the gene mutations and chromosome mutations.	
• Identify different types of mutations.	
• Explain the cause of mutations.	
• State the potential effects of mutations on proteins produced as being beneficial, neutral, or harmful,	
• Recognize substitution, insertion, and deletion gene mutations,	
• Recognize duplication, inversion, and deletion chromosomal mutations,	
• Distinguish between spontaneous mutations and induced mutations	

OBSTETRICS & GYNECOLOGY

OBJECTIVES	LEARNING STRATEGY
Uterine Prolapse	Interactive Lecture
• Discuss the anatomy of Uterus & Vagina and their anatomical support	
• Correlate the anatomical defects causing this problem	
• Risk Factors causing this problem	
• Outline of management	
• Common disorders of menstrual cycle	
Antenatal care	
• Discuss the significance of antenatal care	
• Identification of high-risk cases and appropriate management	
• Prevent complications to decrease maternal and perinatal morbidity and mortality	
• Counsel the mother to maintain good health during pregnancy	

PATHOLOGY

OBJECTIVES	LEARNING STRATEGY
1. Prostatitis and benign prostatic hyperplasia	Interactive Lecture
• Describe the pathophysiology & clinical presentation of benign prostatic hyperplasia and prostatitis	
2. Vaginal Infections	
• Describe the pathophysiology of vaginal Infections	
3. Pelvic Inflammatory Diseases (PID)	
• Discuss the microorganism, pathogenesis, morphology, and complication of Pelvic Inflammatory Diseases (PID)	
4. Fibroids	
• Define fibroids	
• List the different types of fibroids	
• Discuss their origin & pathophysiology of fibroids	
• Discuss different sign & symptoms of fibroids	

PHARMACOLOGY

OBJECTIVES	LEARNING STRATEGY
1. Contraceptive drugs	Interactive Lecture
• Classify contraceptive drugs	
• Discuss the dynamics of different hormonal contraceptive drugs	
2. Estrogens and Anti-estrogens	Small Group Discussion
• Classify estrogens and antiestrogens	
• Discuss the basic and clinical pharmacology of these agents	
• Treatment of PCOS	

PHYSIOLOGY

OBJECTIVES	LEARNING STRATEGY
1. Spermatogenesis, Semen & Capacitation of Sperms	Interactive Lecture / Practical
<ul style="list-style-type: none"> • Explain the stages of spermatogenesis • Describe the hormonal control of spermatogenesis <ul style="list-style-type: none"> • Discuss Interpretation of a semen sample • Discuss Premenopausal syndrome 	
2. Male Sex Hormone: Testosterone & its functions	
<ul style="list-style-type: none"> • Describe the synthesis, function, and regulation of male sex hormones <ul style="list-style-type: none"> • Spermatogenesis and Male sex hormones 	
3. Abnormalities of Male sexual function	Interactive Lecture/ Small Group Discussion / Tutorial / CBL
<ul style="list-style-type: none"> • Discuss the abnormalities of male sexual function (hypo and hypergonadism) 	
4. Functions of Ovary	
<ul style="list-style-type: none"> • Discuss oogenesis, stages of follicle development through ovulation and formation of corpus luteum <ul style="list-style-type: none"> • Discuss Functions of Ovaries and Ovarian Hormones • Discuss Polycystic Ovarian syndrome • Discuss Sexually transmitted diseases • Describe Endometrial & Ovarian cycle • Discuss Hormonal control of Menstrual cycle and physiological changes in pregnancy 	
5. Puberty, Menstrual Cycle, Menarche & Menopause	
<ul style="list-style-type: none"> • Describe the synthesis, function, and regulation of hormones in the female reproductive system • Describe the hormonal changes and control mechanism of the changes that occur during puberty • Explain the secondary sexual characteristics that develop during puberty in males and females • Explain the control of secretion of FSH and LH through negative and positive feedback during the menstrual cycle <ul style="list-style-type: none"> • Describe the cyclical changes that occur in endometrium and hormonal mechanisms that control these changes • Discuss Post-Menopausal 	Interactive Lecture/ Small Group Discussion/ Case-Based Learning / SDL
6. Pregnancy, Functions of Placenta, Maternal Changes During Pregnancy & Parturition	Interactive Lecture/ Small Group Discussion
<ul style="list-style-type: none"> • List hormones secreted by the placenta and their actions • Interpret endocrine assays during the course of pregnancy • Describe the physiological changes during pregnancy concerning all organs and systems • Describe briefly parturition, especially its stages, mechanism & hormones <ul style="list-style-type: none"> • Discuss female reproductive system (Practical / SGD) 	
7. Mammary Gland & Lactation	
<ul style="list-style-type: none"> • Describe the hormonal requirements for the development of the mammary gland during pregnancy and milk ejection reflexes 	

8. Physiology of Lactation	Interactive Lecture/ Small Group Discussion
<ul style="list-style-type: none"> Describe the Physiology of Lactation Describe the hormonal control of lactation 	

RESEARCH & SKILLS DEVELOPMENT CENTER

TOPICS & OBJECTIVES	LEARNING STRATEGIES
Per vaginal examination	Hands-on / Practical
<ul style="list-style-type: none"> Perform per vaginal examination by examination and inspection of external genitalia. learn the technique of speculum insertion and proper handling. Identify and inspect the cervix using the speculum. Perform a bimanual finger examination to palpate e cervix and the cervical Identify the uterus size and position. Palpate adnexa and fallopian tubes. 	
Prostate examination	
<ul style="list-style-type: none"> Perform prostate examination 	

EMBRYOLOGY

OBJECTIVES	LEARNING STRATEGY
<ul style="list-style-type: none"> Discuss the Congenital anomalies of male reproductive system (CBD) Discuss the Development of male reproductive system Discuss the Congenital abnormalities of FRT Discuss the Development of Female Reproductive Tract Discuss Klinefelters syndrome 	Interactive Lecture / CBL / SDL

HISTOLOGY

OBJECTIVES	LEARNING STRATEGY
<ul style="list-style-type: none"> Describe the histology of Testes, Epididymis & Vas deference Describe the histology of Prostate, seminal vesicle & bulbourethral gland Describe the histology of Ovary & Fallopian tubes Describe the histology of Uterus, cervix and vagina 	Practical / SGD

PAKISTAN STUDIES

TOPICS & OBJECTIVES	LEARNING STRATEGIES
<ul style="list-style-type: none"> • Discuss the Ideology of Pakistan • Discuss the Pakistan Movement 	Lecture

RADIOLOGY

TOPICS & OBJECTIVES	LEARNING STRATEGIES
<ul style="list-style-type: none"> • Discuss Imaging of Male & Female pelvic organs 	SGD

DHPE

TOPICS & OBJECTIVES	LEARNING STRATEGIES
<ul style="list-style-type: none"> • Developing e-poster presentation 	Hands on demonstration

LEARNING RESOURCES:

SUBJECT	RESOURCES
ANATOMY	<p>A. <u>GROSS ANATOMY</u></p> <ol style="list-style-type: none"> 1. K.L. Moore, Clinically Oriented Anatomy 2. Neuro Anatomy by Richard Snell <p>B. <u>HISTOLOGY</u></p> <ol style="list-style-type: none"> 1. B. Young J.W. Health Wheather’s Functional Histology <p>C. <u>EMBRYOLOGY</u></p> <ol style="list-style-type: none"> 1. KeithL. Moore. The Developing Human 2. Langman’s Medical Embryology
BIOCHEMISTRY	<p><u>TEXTBOOKS</u></p> <ol style="list-style-type: none"> 1. Harper’s Illustrated Biochemistry 2. Lehninger Principle of Biochemistry 3. Biochemistry by Devlin
PHYSIOLOGY	<p>A. <u>TEXTBOOKS</u></p> <ol style="list-style-type: none"> 1. Textbook of Medical Physiology by Guyton and Hall 2. Ganong’S Review of Medical Physiology 3. Human Physiology by Lauralee Sherwood 4. Berne and Levy Physiology 5. Best and Taylor Physiological Basis of Medical Practice <p>B. <u>REFERENCE BOOKS</u></p> <ol style="list-style-type: none"> 1. Guyton and Hall Physiological Review 2. Essentials of Medical Physiology by Jaypee 3. Textbook of Medical Physiology by Indu Khurana 4. Short Textbook of Physiology by Arthur 5. NMS Physiology

ASSESSMENT METHODS:

- **Best Choice Questions (BCQs)** also known as MCQs (Multiple Choice Questions)
- **Objective Structured Practical/Clinical Examination (OSPE or OSCE)**

Internal Evaluation

- Students will be assessed comprehensively through multiple methods.
- 20% marks of internal evaluation will be added to JSMU final exam. That 20% may include class tests, assignments, practicals, and the internal exam which will all have specific marks allocation.

Formative Assessment

Individual departments may hold quizzes or short answer questions to help students assess their learning. The marks obtained are not included in the internal evaluation

For JSMU Examination Policy, please consult the JSMU website!

More than 75% attendance is needed to sit for the internal and final examination



LNH&MC EXAMINATION RULES & REGULATIONS

- Student must report to examination hall/venue, 30 minutes before the exam.
- **Exam will begin sharply at the given time.**
- No student will be allowed to enter the examination hall after 15 minutes of scheduled examination time.
- Students must sit according to their roll numbers mentioned on the seats.
- **Cell phones are strictly not allowed in the examination hall.**
- If any student is found with a cell phone in any mode (silent, switched off, or on) he/she will not be allowed to continue their exam.
- No students will be allowed to sit in an exam without University Admit Card, LNMC College ID Card, and Lab Coat
- Students must bring the following stationary items for the exam: Pen, Pencil, Eraser, and Sharpener.
- Indiscipline in the exam hall/venue is not acceptable. Students must not possess any written material or communicate with their fellow students.

SCHEDULE

WEEKS	2 ND YEAR	MONTH
WEEK 1-5	REPRODUCTIVE MODULE – I	5 th August 2024
		4 th September 2024

*Final dates will be announced later.