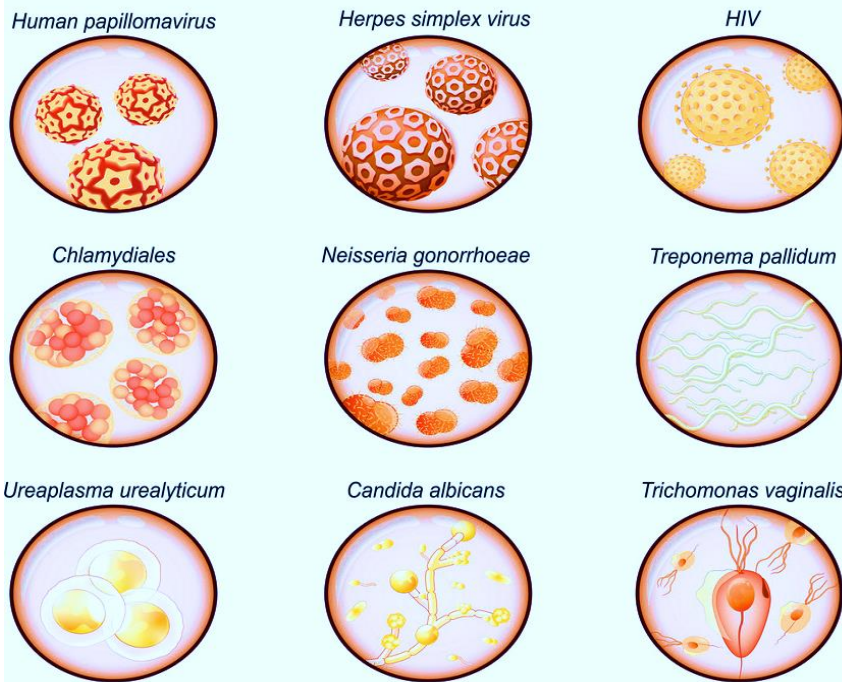


# Study Guide- Fourth Year MBBS

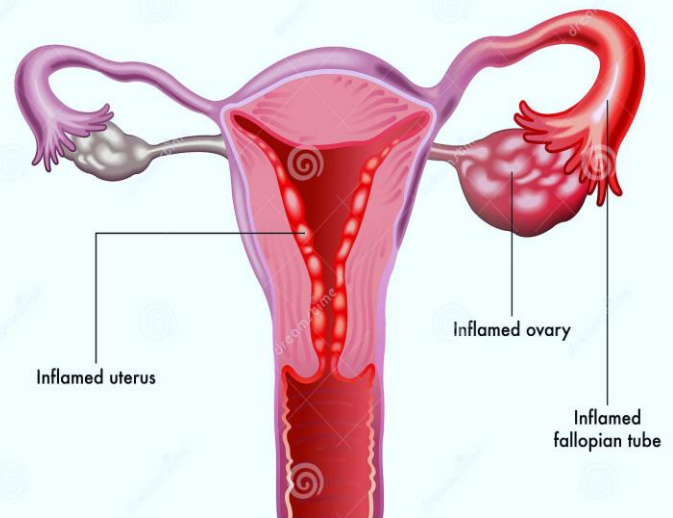
## REPRODUCTIVE MODULE 2

### Sexually transmitted infection

- 11 April – 28 May 2022
- Duration: 6 weeks



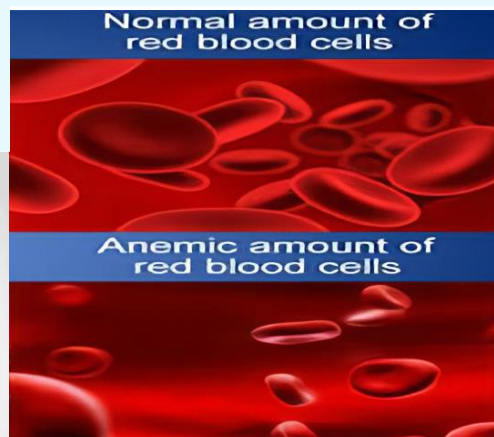
### Pelvic inflammatory diseases



Sexual violence

Domestic violence

REPRODUCTIVE HEALTH



**STUDY GUIDE FOR REPRODUCTIVE 2 MODULE**

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Module name: **Reproductive System-II** Year: **Four** Duration: **6 weeks (April – May 2022)**

Timetable hours: **Lectures, Case-Based Learning (CBL), Clinical Rotations, Tutorial, Skills, Self-Study**

### MODULE INTEGRATED COMMITTEE

<b>MODULE COORDINATOR:</b>	<ul style="list-style-type: none"> <li>• Dr. Aisha Taj (Obstetrics &amp; Gynecology)</li> </ul>
<b>CO-COORDINATORS:</b>	<ul style="list-style-type: none"> <li>• Dr. Uzma Shabab (Obstetrics &amp; Gynecology)</li> <li>• Dr. Afifa Tabassum (DHPE)</li> </ul>

### DEPARTMENTS' & RESOURCE PERSONS' FACILITATING LEARNING

BASIC HEALTH SCIENCES	CLINICAL AND ANCILLARY DEPARTMENTS
<b>ANATOMY</b> <ul style="list-style-type: none"> <li>• Professor Zia-ul-Islam</li> </ul>	<b>ANAESTHESIA</b> <ul style="list-style-type: none"> <li>• Professor Nighat Abbas</li> </ul>
<b>COMMUNITY MEDICINE</b> <ul style="list-style-type: none"> <li>• Dr. Saima Zainab</li> </ul>	<b>OBSTETRICS &amp; GYNECOLOGY</b> <ul style="list-style-type: none"> <li>• Dr. Aisha Taj</li> <li>• Dr. Uzma Shabab</li> </ul>
<b>MICROBIOLOGY</b> <ul style="list-style-type: none"> <li>• Professor Shaheen Sharafat</li> </ul>	<b>PSYCHIATRY</b> <ul style="list-style-type: none"> <li>• Dr. Iqtidar Taufiq</li> </ul>
<b>PATHOLOGY</b> <ul style="list-style-type: none"> <li>• Professor Naveen Faridi</li> </ul>	<b>RADIOLOGY</b> <ul style="list-style-type: none"> <li>• Dr. Misbah Tahir</li> </ul>
<b>PHARMACOLOGY</b> <ul style="list-style-type: none"> <li>• Professor Tabassum Zehra</li> </ul>	<b>UROLOGY</b> <ul style="list-style-type: none"> <li>• Professor Aziz Abdullah</li> </ul>
<b>PHYSIOLOGY</b> <ul style="list-style-type: none"> <li>• Professor Syed Hafeezul Hassan</li> </ul>	<b>RESEARCH &amp; SKILLS DEVELOPMENT CENTER</b> <ul style="list-style-type: none"> <li>• Dr. Kahkashan Tahir</li> </ul>
	<b>SURGERY</b> <ul style="list-style-type: none"> <li>• Professor Rufina Soomro</li> </ul>
<b>DEPARTMENT of HEALTH PROFESSIONS EDUCATION</b> <ul style="list-style-type: none"> <li>• Professor Nighat Huda</li> <li>• Professor Sobia Ali</li> <li>• Dr. Afifa Tabassum</li> <li>• Dr. Sana Shah</li> </ul>	
<b>LNH&amp;MC MANAGEMENT</b> <ul style="list-style-type: none"> <li>• Professor K.U. Makki, Principal LNH&amp;MC</li> <li>• Dr. Shaheena Akbani, Director A.A &amp; R.T LNH&amp;MC</li> </ul>	
<b>STUDY GUIDE COMPILED BY:</b> Faiza Ambreen , Department of Health Professions Education	

## **INTRODUCTION**

### **WHAT IS A STUDY GUIDE?**

It is an aid to:

- Inform students how 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

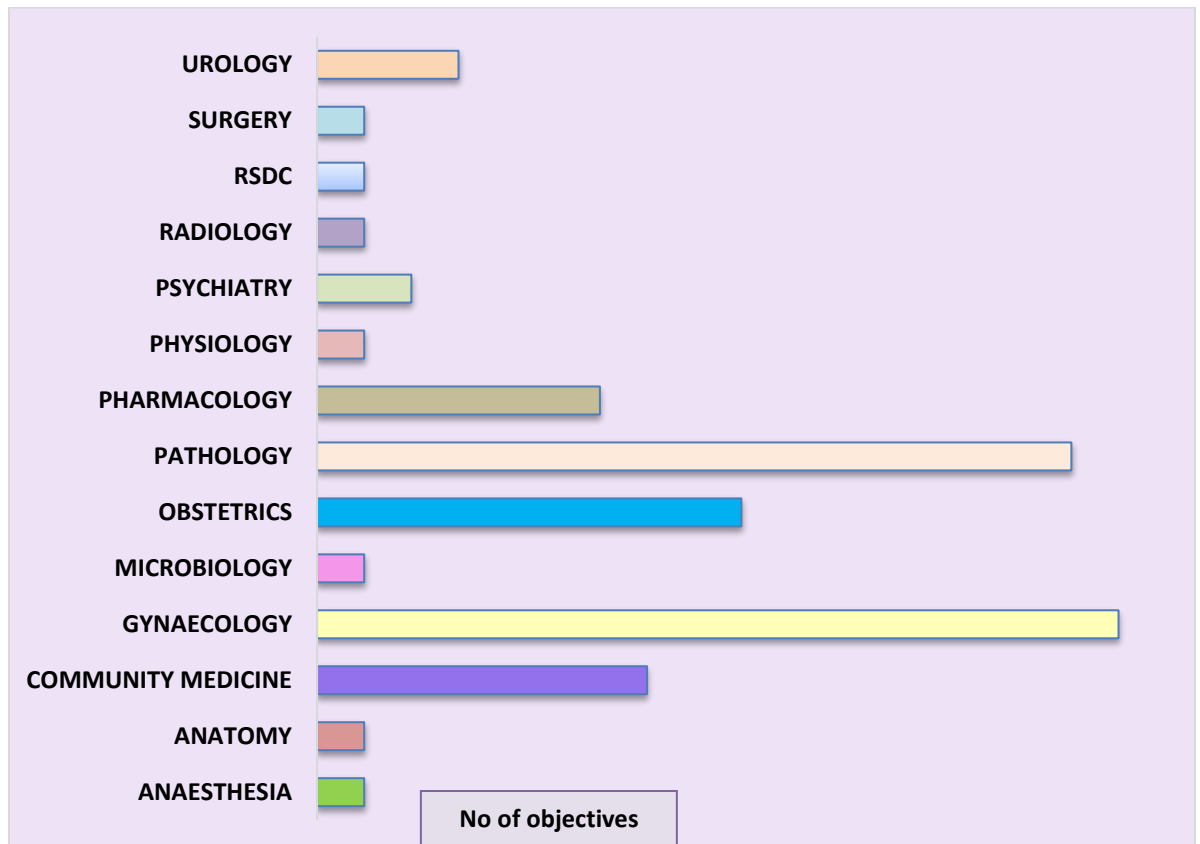
### **THE STUDY GUIDE:**

- 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, clinical skills, demonstration, tutorial and case based learning that will be implemented to achieve the module objectives.
- Provides a list of learning resources such as books, computer assisted learning programs, web-links, 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 achievement of objectives.
- Focuses on information pertaining to examination policy, rules and regulations.

**INTEGRATED CURRICULUM** comprises system-based modules such as Eye/ENT, Orthopedics, Dermatology, Genetics and Reproductive System-II which links basic science knowledge to clinical problems. Integrated teaching means that subjects are presented as a meaningful whole. Students will be able to have better understanding of basic sciences when they repeatedly learn in relation to clinical examples.

**LEARNING EXPERIENCES:** Case based integrated discussions, Task oriented learning followed by task presentation, skills acquisition in skills lab, computer-based assignments, learning experiences in clinics, wards.

## INTEGRATING DISCIPLINES OF REPRODUCTIVE SYSTEM II MODULE



### LEARNING METHODOLOGIES

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

- Interactive Lectures
- Small Group Discussion
- Case- Based Learning (CBL)
- Clinical Experiences
  - Clinical Rotations
- Skills session
- Self-Directed Learning

**INTERACTIVE LECTURES:** In large group, the lecturer introduces a topic or common clinical conditions and explains the underlying phenomena through questions, pictures, videos of patients' interviews, exercises, etc. Students are actively involved in the learning process.

**SMALL GROUP SESSION:** This format helps students to clarify concepts, acquire skills or desired attitudes.

Sessions are structured with the help of specific exercises such as patient case, interviews or discussion topics. Students exchange opinions and apply knowledge gained from lectures, tutorials and self study. The facilitator role is to ask probing questions, summarize, or rephrase to help clarify concepts.

**CASE-BASED LEARNING (CBL):** A small group discussion format where learning is focused around a series of questions based on a clinical scenario. Students' discuss and answer the questions applying relevant knowledge gained previously in clinical and basic health sciences during the module and construct new knowledge. The CBD will be provided by the concerned department.

**CLINICAL LEARNING EXPERIENCES:** In small groups, students observe patients with signs and symptoms in hospital wards, clinics and outreach centers. This helps students to relate knowledge of basic and clinical sciences of the module and prepare for future practice.

- **CLINICAL ROTATIONS:** In small groups, students rotate in different wards like Medicine, Pediatrics, Surgery, Obs & Gyne, ENT, Eye, Family Medicine clinics, outreach centers & Community Medicine experiences. Here students observe patients, take histories and perform supervised clinical examinations in outpatient and inpatient settings. They also get an opportunity to observe medical personnel working as a team. These rotations help students relate basic medical and clinical knowledge in diverse clinical areas.

**SKILLS SESSION:** Skills relevant to respective module are observed and practiced where applicable in simulated-learning environment such as skills laboratory.

**SELF-DIRECTED LEARNING:** Students' assume responsibilities of their own learning through individual study, sharing and discussing with peers, seeking information from Learning Resource Center, teachers and resource persons within and outside the college. Students can utilize the time within the college scheduled hours of self-study.

## **MODULE: REPRODUCTIVE 2**

### **INTRODUCTION**

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.

Despite improvement in the reproductive health status of population in Pakistan, it is much below the desired Sustainable Development Goal target level. The maternal mortality ratio (MMR) for Pakistan is 178 per 100,000 live births majority resulting from preventable causes related to pregnancy and childbirth. Maternal health and newborn health are closely linked. The reported perinatal mortality rate of Pakistan is 64 per 1,000 births.

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.



1. Bhutta ZA, Hafeez A, Rizvi A, Ali N, Khan A, Ahmad F, Bhutta S, Hazir T, Zaidi A, Jafarey SN. Reproductive, maternal, newborn, and child health in Pakistan: challenges and opportunities. *The Lancet*. 2013 Jun 28;381(9884):2207-18.
2. WHO, UNICEF, UNFPA, World Bank Group, and the United Nations Population Division. Trends in Maternal Mortality: 2015 to 2017. Geneva, World Health Organization, 2017
3. United Nations Population Division's World Population Prospects, 2016. Available from: <https://data.worldbank.org/indicator/SP.DYN.IMRT.IN>
4. Sheet WF. Maternal Mortality. World Health Organization webpage, World Health Organization. 2013;1.

**MODULE OBJECTIVES AND STRATEGIES**

By the end of Reproductive 2 module students should be able to:

***ANAESTHESIA***

OBJECTIVES	LEARNING STRATEGY
<b>Analgesia &amp; Anesthesia in Obstetrics</b>	Interactive Lecture
<ul style="list-style-type: none"> <li>Describe analgesic techniques used in labor and cesarean delivery</li> </ul>	
<ul style="list-style-type: none"> <li>Describe different anesthetic options used in labor and cesarean delivery including the risks and benefits of general, spinal, &amp; epidural anesthesia, pudendal nerve block, and narcotics</li> </ul>	

***ANATOMY***

OBJECTIVES	LEARNING STRATEGY
<b>Pelvis and Pelvimetry</b>	Interactive Lecture/ Tutorial
<ul style="list-style-type: none"> <li>Describe the structure of male and female genital tract</li> </ul>	
<ul style="list-style-type: none"> <li>Describe the gross anatomy of the female pelvic organs including: the ovaries, uterine tubes, the uterus, the broad ligament and the vagina</li> </ul>	
<ul style="list-style-type: none"> <li>Explain the role of clinical pelvimetry</li> </ul>	

***COMMUNITY MEDICINE***

OBJECTIVES	LEARNING STRATEGY
<b>1. Introduction to reproductive health</b>	Interactive Lecture
<ul style="list-style-type: none"> <li>Describe the components of reproductive health</li> <li>Explain the approaches of health education related to reproductive health</li> </ul>	
<b>2. Maternal care</b>	Tutorial
<ul style="list-style-type: none"> <li>Explain the determinants of maternal care</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss high-risk pregnancies</li> </ul>	
<ul style="list-style-type: none"> <li>Describe Preventive measures of maternal mortality</li> </ul>	
<b>3. Infant Care</b>	
<ul style="list-style-type: none"> <li>Discuss the risk factors for infant care</li> </ul>	
<ul style="list-style-type: none"> <li>Explain the components of infant care</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the role of mother &amp; of breastfeeding in infant care</li> </ul>	
<ul style="list-style-type: none"> <li>Describe the preventive measures of infant mortality</li> </ul>	



<b>4. Integrated Management of Neonatal &amp; Childhood Illness (IMNCI)</b>	
• Describe the components of IMNCI	
• Discuss the role of community and family practice in IMNCI	
• Explain the process of assessment of danger signs in IMNCI	
<b>5. Family Planning</b>	
• Describe family planning	
• Explain methods used in family planning	
• List the common reasons for unmet need of Family Planning (UMNFP)	
<b>6. Reproductive Tract Infections</b>	
• Classify reproductive tract infections	
• Discuss epidemiology of Reproductive Tract Infections	
• Discuss the syndromic management of reproductive tract infections	
• Describe the preventive measures of HIV/AIDS	
• Describe HIV/AIDS control Programme in Pakistan	
<b>7. Fertility determinants</b>	
• Differentiate between fertility and fecundability	
• Describe determinants of fertility	
• Calculate the measures of fertility	

## GYNAECOLOGY

OBJECTIVES	LEARNING STRATEGY
<b>1. Terminologies &amp; definitions related to menstrual disorders (Amenorrhea, Oligomenorrhea, Menorrhagia, dysmenorrhea, dyspareunia)</b>	Interactive Lecture
• Define primary & secondary amenorrhea, oligomenorrhea, menorrhagia, dysmenorrhea, dyspareunia, post-menopausal bleeding, post-coital bleeding, pre-menstrual syndrome	
• Explain the etiology, and symptoms and signs, of primary and secondary amenorrhea, and oligomenorrhea	
• Differentiate among the three types of amenorrhea	
• Define primary & secondary dysmenorrhea	
• Interpret the investigation findings of clinical abnormalities of the menstrual cycle	
<b>2. Bleeding PV and early pregnancy complications {Miscarriages, Ectopic pregnancy, and Gestational Trophoblastic diseases/ neoplasia (molar) GTD/GTN}</b>	
• List the most common pregnancy complications	
• Define ectopic pregnancy	
• Discuss differential diagnosis of acute abdomen in women	
• Diagnose ectopic pregnancy, based on provided data (history, examination findings, investigation reports)	
• Define abortion according to WHO criteria	
• Differentiate among the various types of abortions based on data provided (history, examination findings, investigation reports)	

<ul style="list-style-type: none"> <li>Describe the treatment options for each type of abortion</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the definition, etiology, risk factors and the classification of GTN</li> </ul>	
<b>3. Postpartum Care and puerperal disorders</b>	
<ul style="list-style-type: none"> <li>Define puerperium</li> </ul>	
<ul style="list-style-type: none"> <li>Describe signs and symptoms, and management of normal and abnormal puerperium, including puerperal pyrexia and puerperal sepsis</li> </ul>	
<ul style="list-style-type: none"> <li>Recognize the risk factors for depression (postpartum blues) and the role of psychosocial support</li> </ul>	
<ul style="list-style-type: none"> <li>Identify the capacity of mother to take care of her newborn</li> </ul>	
<b>4. Lactation management and breast care</b>	
<ul style="list-style-type: none"> <li>Discuss the benefits &amp; complications of breastfeeding for the baby, mother, family, and country</li> </ul>	Interactive Lecture
<ul style="list-style-type: none"> <li>Discuss the role of counseling by health care provider about breast feeding at term</li> </ul>	
<ul style="list-style-type: none"> <li>Explain the significance of self-breast examination and clinical examination</li> </ul>	
<b>5. Poly-Cystic Ovary Syndrome (PCOS)</b>	
<ul style="list-style-type: none"> <li>Interpret the hormone profile report for PCOS</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the etiology, pathophysiology, diagnosis, and management options for PCOS</li> </ul>	
<b>6. Vulvo-vaginal infections (vaginal discharge)</b>	
<ul style="list-style-type: none"> <li>List the causes of vaginal discharge (candida, bacterial vaginosis, trichomoniasis)</li> </ul>	Interactive Lecture
<ul style="list-style-type: none"> <li>Differentiate between a normal vaginal discharge (Leucorrhea) and pathological vaginal discharge on the basis of clinical history</li> </ul>	
<ul style="list-style-type: none"> <li>Describe symptoms, signs, investigations and treatment options for vaginal discharge due to Candidiasis, Bacterial vaginosis, Trichomoniasis, Gonorrhoea and Chlamydia trachomatis infection</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss steps of prevention and recurrence of vaginal discharge</li> </ul>	
<b>7. Pelvic Inflammatory Disease (PID, STIs)</b>	
<ul style="list-style-type: none"> <li>Define Pelvic Inflammatory disease (PID)</li> </ul>	
<ul style="list-style-type: none"> <li>Diagnose PID based on symptoms, signs and investigation findings</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the differential diagnosis of PID and its possible complications</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the management options for acute and chronic PID</li> </ul>	
<b>8. Sexually transmitted diseases</b>	
<ul style="list-style-type: none"> <li>Explain the etiology of Sexually Transmitted Infections (STIs), Post delivery PID, Post-abortion PID and post-surgical PID</li> </ul>	
<b>9. UTI in Gynaecology (Cystitis, Lower Urinary Tract Symptoms)</b>	
<ul style="list-style-type: none"> <li>Based on data provided, diagnose UTI in pregnant women</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the principles underlying their effective investigation and treatment</li> </ul>	
<b>10. Infertility</b>	
<ul style="list-style-type: none"> <li>Define infertility and sub-fertility</li> </ul>	Interactive Lecture/ Tutorial
<ul style="list-style-type: none"> <li>Discuss the causes and relevant investigations of an-ovulation in women</li> </ul>	
<ul style="list-style-type: none"> <li>Interpret the reports of Semen analysis in male and fertility-related hormone profile in female</li> </ul>	

<b>11. Benign tumors of the genital tract I (Ovarian cysts, Polyps, Fibroid)</b>	Interactive Lecture
<ul style="list-style-type: none"> <li>Describe the benign tumors of female genital tract</li> <li>Differentiate among the various types of ovarian cysts, polyps &amp; fibroids based on their etiology, symptoms, signs and pathophysiology</li> <li>Justify the selection of investigations for ovarian cysts, polyps &amp; fibroid uterus</li> </ul>	
<b>12. Gynecological Investigations</b>	
<ul style="list-style-type: none"> <li>Describe the of role of Hysteroscopy &amp; Hystrosalpingiogram</li> <li>Interpret the lab investigation X-Rays &amp; laparoscopic views of different disorders</li> <li>Identify the hard and soft copy views of X rays and contrast X-rays</li> <li>Identify the laparoscopic views of adnexal mass, ruptured and un-ruptured ectopic pregnancy, PID and TO mass, endometriosis, and pelvic adhesions</li> <li>Identify the hysteroscopy views (endometrial polyp, normal uterine cavity, sub mucus fibroid, septate uterus) including Colposcopy views of cervix</li> </ul>	Tutorial
<b>13. Public health issues related to reproductive health</b>	Interactive Lecture
<ul style="list-style-type: none"> <li>Discuss the maternal health situation in Pakistan</li> <li>Discuss the important causes of maternal mortality and morbidity</li> <li>Describe maternal health services</li> <li>Describe the levels of obstetric care including obstetric first aid, basic EmNOC,comprehensive EmNOC</li> <li>List the basic steps of counseling in reproductive health, with emphasis on family planning</li> <li>Discuss the role of contraception in population dynamics</li> </ul>	
<b>14. Family planning (contraceptive) methods</b>	
<ul style="list-style-type: none"> <li>Describe the commonly used methods of family planning, and their indications</li> <li>Explain their significance</li> </ul>	
<b>15. History taking</b>	
<b>Perform on patient</b>	
<ul style="list-style-type: none"> <li>Per abdominal examination</li> </ul>	
<b>Perform on manikin</b>	
<ul style="list-style-type: none"> <li>Per abdominal examination</li> <li>Perspeculum examination</li> <li>Pap smear</li> <li>High vaginal swab</li> <li>DNC (on manikin)</li> <li>Manual vacuum aspiration MVA</li> <li>Forceps delivery</li> <li>Foleys catheterization</li> </ul>	Tutorial
<b>Observe on patient</b>	
<ul style="list-style-type: none"> <li>Mechanism of labor &amp; normal Vaginal delivery</li> <li>Pap smear</li> <li>High vaginal swab</li> <li>DNC</li> </ul>	

<b>Instruments in Gynaecology</b>	
<ul style="list-style-type: none"> <li>Identify the following instruments: <ul style="list-style-type: none"> <li>i. Cusco speculum</li> <li>ii. Sims speculum</li> <li>iii. Ayers spatula</li> <li>iv. Instruments of DNC &amp; MVA</li> <li>v. Forceps &amp; vacuum</li> </ul> </li> <li>Discuss their uses, indications and contraindications, and complications</li> </ul>	
<b>16. Investigations in Gynae: Hysteroscopic X-Rays &amp; Laparoscopic views of different disorders</b>	
<ul style="list-style-type: none"> <li>Identify the hard and soft copy views of: <ul style="list-style-type: none"> <li>i. X rays and contrast X-rays</li> <li>ii. Laparoscopic views (adnexal mass, ruptured and unruptured ectopic pregnancy, PID and TO mass, endometriosis, pelvic adhesions),</li> <li>iii. Hysteroscopic views (endometrial polyp, normal uterine cavity, submucous fibroid, septate uterus) including Colposcopic views of cervix</li> </ul> </li> </ul>	
<b>17. Differential diagnosis of a mass in abdomen, pain in abdomen &amp; bleeding PV</b>	
<ul style="list-style-type: none"> <li>Make a differential diagnosis of a mass in abdomen, pain in abdomen &amp; bleeding PV</li> </ul>	Case Based learning

## **MICROBIOLOGY**

OBJECTIVES	LEARNING STRATEGY
<b>Sexually Transmitted Infections (STI)</b>	
<ul style="list-style-type: none"> <li>Define STI</li> <li>List the important microorganisms causing STI</li> <li>Discuss the risk factors, pathophysiology, morphology and clinical presentation of STI's</li> <li>Discuss in detail the pathophysiology, clinical manifestation, laboratory diagnosis, and treatment of: <ul style="list-style-type: none"> <li>i. CMV</li> <li>ii. Chlamydial infection</li> <li>iii. Syphilis (<i>Treponema pallidum</i>)</li> </ul> </li> <li>Briefly discuss the role of HIV as sexually transmitted infection</li> </ul>	Interactive Lecture/Tutorial

**OBSTETRICS**

OBJECTIVES	LEARNING STRATEGY		
<b>1. Antenatal care &amp; Assessment</b>	Tutorial		
<ul style="list-style-type: none"> <li>Explain the importance of routine prenatal laboratory investigations, prenatal diagnostic options (IPS, Quad screen, amniocentesis, CVS) and fetal ultrasound assessment</li> </ul>			
<ul style="list-style-type: none"> <li>Explain the process/schedule of antenatal care and investigations (GDM screening, Rh prophylaxis, GBS screening, term cervical assessment) and its importance in ensuring maternal health and normal fetal growth and well-being</li> </ul>			
<b>2. Antenatal investigation</b>			
<ul style="list-style-type: none"> <li>Explain the importance and process antenatal care and investigations</li> </ul>			
<ul style="list-style-type: none"> <li>Interpret Rh prophylaxis, GBS screening, term cervical assessment to ensure maternal health and normal fetal growth and well being</li> </ul>			
<b>3. Normal Labor</b>		Interactive Lecture	
<ul style="list-style-type: none"> <li>Define labor</li> </ul>			
<ul style="list-style-type: none"> <li>Explain the stages of normal labor</li> </ul>			
<ul style="list-style-type: none"> <li>Describe the basic mechanisms of labor evaluation</li> </ul>			
<ul style="list-style-type: none"> <li>Describe the seven cardinal movements of labor</li> </ul>			
<ul style="list-style-type: none"> <li>Explain the technique of delivery, traction, and handling of infant after delivery</li> </ul>			
<ul style="list-style-type: none"> <li>Define Partogram and CTG</li> </ul>			
<ul style="list-style-type: none"> <li>List the uses of partograph and CTG in the management of normal labor</li> </ul>			
<ul style="list-style-type: none"> <li>Interpret result of patogram</li> </ul>			
<b>4. Anemia in pregnancy</b>	Interactive Lecture		
<ul style="list-style-type: none"> <li>Discuss the causes, sign and symptoms, and investigations of anemia in pregnancy</li> </ul>			
<ul style="list-style-type: none"> <li>Outline its management</li> </ul>			
<ul style="list-style-type: none"> <li>Explain the complications of anemia in pregnancy and its effects of anemia on maternal and fetal outcome</li> </ul>			
<b>5. Preterm Labour</b>			Interactive Lecture
<ul style="list-style-type: none"> <li>Differentiate between Threatened preterm labour, Preterm pre-labor rupture of membranes and preterm labor</li> </ul>			
<ul style="list-style-type: none"> <li>Discuss the clinical features, diagnosis and management of preterm labour and preterm pre-labor rupture of membranes</li> </ul>			
<ul style="list-style-type: none"> <li>Appraise the principles of diagnosis and management of Threatened preterm labor, Preterm pre-labor rupture of membranes and Preterm labor</li> </ul>			
<ul style="list-style-type: none"> <li>List the causes of IUD</li> </ul>			
<b>6. Abnormal Labor-I (Fetal mal-presentation and malposition)</b>		Interactive Lecture	
<ul style="list-style-type: none"> <li>Define mal-presentation &amp; malposition</li> </ul>			
<ul style="list-style-type: none"> <li>List the different types of mal-presentation &amp; malposition</li> </ul>			

<ul style="list-style-type: none"> <li>Describe the causes of Breech, Transverse lie and other mal-presentations and mal-positions</li> <li>Describe the management options for mal-presentation and malposition</li> </ul>	Tutorial
<b>7. Abnormal Labor-II (Obstructed Labor)</b>	
<ul style="list-style-type: none"> <li>Define obstructed labor</li> <li>List the main causes of obstructed labour</li> <li>Describe how each cause contributes to the development of this complication</li> <li>Describe the clinical signs of obstructed labour and the common maternal and fetal complications that result from uterine obstruction</li> <li>Describe the management of obstructed labour</li> </ul>	
<b>8. Induction of Labor</b>	
<ul style="list-style-type: none"> <li>Define induction and augmentation of labor</li> <li>Explain indications, contraindications, advantages and disadvantages of induction and augmentation of labor</li> <li>Discuss the monitoring and management of induced and augmented labor</li> <li>Discuss the management of abnormal partograph and CTG</li> </ul>	
<ul style="list-style-type: none"> <li>i. Obstetrics history taking</li> <li>ii. Obstetric examination (Perform on patient/manikin)</li> <li>iii. P/A &amp; antenatal investigations</li> <li>iv. Antenatal card</li> <li>v. Discharge card</li> <li>vi. Interpretation of normal and abnormal CTG &amp; Partogram</li> </ul>	
<b>9. Instruments related to obstetrics</b>	
<ul style="list-style-type: none"> <li>Identify the following instruments: <ul style="list-style-type: none"> <li>i. Instruments of C/section</li> <li>ii. Outlet forceps</li> <li>iii. Vacuum</li> <li>iv. Episiotomy scissors</li> <li>v. Fetoscope</li> </ul> </li> <li>Discuss their uses, indications and contraindications, and complications</li> </ul>	

## PATHOLOGY

OBJECTIVES	LEARNING STRATEGY
<b>1. Congenital anomalies of female and male genital tract; Epididymo-orchitis</b>	Interactive Lecture/ Tutorial
<ul style="list-style-type: none"> <li>Describe the various congenital anomalies of female genital tract with their important salient features</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss developmental abnormalities and related features of the hypospadias, Epispadias, phimosis &amp; Cryptorchidism.</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the microorganism, pathogenesis and morphology of specific and non-specific types epididymo-orchitis</li> </ul>	

<b>2. Infectious agents causing genital ulcer disease</b>	
<ul style="list-style-type: none"> <li>List the important microorganism causing genital ulcer disease</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss in detail the pathophysiology, clinical manifestation, laboratory diagnosis, treatment and prevention of:</li> </ul>	
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>i. HSV 2 infection</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>ii. HPV infection</li> </ul> </li> </ul>	
<b>3. Infectious agents causing vaginitis</b>	
<ul style="list-style-type: none"> <li>List the important microorganisms causing vaginitis</li> </ul>	
<ul style="list-style-type: none"> <li>Briefly discuss candida infections</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss in detail the important properties, pathophysiology, clinical manifestation, diagnosis, treatment and prevention of:</li> </ul>	
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>i. Trichomonas vaginalis infection</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>ii. Gardnerella vaginalis infection</li> </ul> </li> </ul>	
<b>4. Pelvic Inflammatory Disease (PID)</b>	
<ul style="list-style-type: none"> <li>Define Pelvic Inflammatory Disease</li> </ul>	
<ul style="list-style-type: none"> <li>List the important microorganisms causing cervicitis and PID</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the risk factors, pathophysiology, morphology and clinical presentation and complications of PID</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the role of Staphylococcus in causing toxic shock syndrome</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss in detail the important properties, pathophysiology, clinical manifestation, laboratory diagnosis, treatment and prevention of Neisseria gonorrhoea infection</li> </ul>	
<b>5. Non-neoplastic and neoplastic conditions of vulva and vagina</b>	
<ul style="list-style-type: none"> <li>Discuss the morphology, pathogenesis and clinical presentation of Bartholin cyst, Lichen Sclerosus, Squamous Cell Hyperplasia, Condyloma Acuminatum, Papillary Hidradenoma and Extramammary Paget Disease, Vulvar Intraepithelial Neoplasia and vulvar carcinoma</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the pathogenesis and morphology of Vaginal Intraepithelial Neoplasia and squamous cell carcinoma, Embryonal rhabdomyosarcoma</li> </ul>	
<b>6. Non-neoplastic and neoplastic conditions of cervix</b>	
<ul style="list-style-type: none"> <li>Discuss the infections of cervix including acute &amp; chronic cervicitis, and Endocervical Polyps</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the risk factors, pathogenesis and morphology of cervical intraepithelial lesions and cervical carcinoma</li> </ul>	
<ul style="list-style-type: none"> <li>Elaborate the role of HPV in cervical cancer,</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss cervical screening methods and pap smear</li> </ul>	
<b>7. Endometrial Hyperplasia &amp; Functional Endometrial Disorders</b>	
<ul style="list-style-type: none"> <li>Define dysfunctional uterine bleeding (DUB)</li> </ul>	
<ul style="list-style-type: none"> <li>Classify abnormal uterine bleeding according to age group and etiology</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the etiology, pathogenesis, morphology and clinical features of Abnormal uterine bleeding and Anovulatory Cycle</li> </ul>	Interactive Lecture

<ul style="list-style-type: none"> <li>Discuss the etiology, pathogenesis, morphology and clinical features of acute and chronic Endometritis, Endometriosis and Adenomyosis and Endometrial Polyps</li> </ul>	
<ul style="list-style-type: none"> <li>Classify Endometrial hyperplasia</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the etiology, pathogenesis, morphology and clinical features of Endometrial hyperplasia</li> </ul>	
<b>8. Tumors of Uterine corpus (Benign and Malignant endometrial tumors)</b>	
<ul style="list-style-type: none"> <li>Classify tumors of uterus/endometrium</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the etiology, pathogenesis, morphology and clinical features of Carcinoma of the Endometrium, Tumors of Endometrial Stroma &amp; mixed Mullerian tumors.</li> </ul>	
<b>9. Non-neoplastic cysts and functional cyst of ovary and Poly Cystic Ovaries</b>	
<ul style="list-style-type: none"> <li>Discuss the follicular and luteal cysts, and their morphology</li> </ul>	
<ul style="list-style-type: none"> <li>Define Polycystic Ovaries (PCOs)</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss its etiology, pathogenesis, morphology and complications</li> </ul>	Interactive Lecture/ Tutorial
<b>10. Ovarian Tumors - I (Tumors of ovary &amp; fallopian tube)</b>	
<ul style="list-style-type: none"> <li>Classify Ovarian tumors</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the etiology, pathogenesis, morphology and clinical features of Serous tumors, Mucinous tumors, Endometrioid tumors, Clear cell tumors, Transitional cell tumors, Adenosarcoma and Malignant mixed Müllerian tumor, and tumors of fallopian tube</li> </ul>	
<b>11. Ovarian Tumors - II</b>	
<ul style="list-style-type: none"> <li>Discuss the etiology, pathogenesis, morphology and clinical features of Sex Cord-Stromal Tumors, Teratoma, Dysgerminoma, Yolk sac tumor, Mixed germ cell tumors and Metastatic Cancer</li> </ul>	
<b>12. Testicular Tumors</b>	Interactive Lecture
<ul style="list-style-type: none"> <li>Classify testicular tumors</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the etiology, pathogenesis, morphology and clinical features of various types of testicular cancer</li> </ul>	
<b>13. Early and late disorders of Pregnancy/ Placenta; pre- eclampsia &amp; eclampsia</b>	Interactive Lecture
<ul style="list-style-type: none"> <li>Discuss the etiology, pathogenesis, morphology and clinical features of: Spontaneous abortion, Ectopic pregnancy, Twin Placenta, Abnormalities of placental insertion, the disorders of placenta viz. Placenta Previa, Placental Abruption, Placental Insufficiency, Placental Infarcts, Placenta Accreta, Placental infection, Preeclampsia and eclampsia</li> </ul>	
<b>14. Gestational Trophoblastic Diseases</b>	Interactive Lecture
<ul style="list-style-type: none"> <li>Discuss the etiology, pathogenesis and morphology of hydatiform mole including complete, partial and invasive mole</li> </ul>	
<ul style="list-style-type: none"> <li>Explain the pathogenesis and morphology of choriocarcinoma and placental site trophoblastic tumor</li> </ul>	



<b>15. Non-proliferative &amp; proliferative breast diseases</b>	Interactive Lecture
<ul style="list-style-type: none"> <li>Name non proliferative and proliferative breast lesions</li> <li>Discuss the etiology, pathogenesis, morphology and clinical features of all non-proliferative and proliferative breast diseases including mastitis, duct ectasia, fat necrosis, fibrocystic change, proliferative breast lesions with and without atypia</li> </ul>	
<b>16. Tumors of breast</b>	Interactive Lecture/ Tutorial
<ul style="list-style-type: none"> <li>Classify Breast tumors</li> <li>Discuss the etiology, risk factors, pathogenesis, morphology, molecular profile and clinical features of various types of breast cancer</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss risk factors, pathogenesis, morphology and clinical features of stromal tumors of breast (Fibroadenoma, Phylloides)</li> </ul>	

### PHARMACOLOGY

OBJECTIVES	LEARNING STRATEGY
<b>1. Androgens &amp; Anti-androgens</b>	Interactive Lecture/ Tutorial
<ul style="list-style-type: none"> <li>Discuss classification of Androgens &amp; Anti-androgens with their basic &amp; clinical pharmacology of these agents</li> <li>Explain the clinical importance of Androgen and Anti-androgens with their basic and clinical pharmacology</li> </ul>	
<b>2. Estrogens &amp; Anti-estrogens</b>	Tutorial
<ul style="list-style-type: none"> <li>Discuss classification of estrogens &amp; anti-estrogens</li> <li>Explain basic &amp; clinical pharmacology of these agents</li> </ul>	
<b>3. Progestins &amp; Anti-progestins</b>	
<ul style="list-style-type: none"> <li>Discuss classification of Progestins, Anti-progestins</li> <li>Explain the basic &amp; clinical pharmacology of these agents</li> </ul>	Case Based learning
<b>4. Drug used in pregnancy &amp; lactation</b>	
<b>5. Contraceptive Drugs</b>	Interactive Lecture/ Tutorial
<ul style="list-style-type: none"> <li>Discuss the classification, kinetics and dynamics of different hormonal contraceptive drugs</li> <li>Explain the clinical importance of Contraceptive Preparations</li> </ul>	
<b>6. Effects of different drugs on the rat uterus</b>	Tutorial
<ul style="list-style-type: none"> <li>Observe the effects of the drug Oxytocin on rat uterus by using power lab</li> </ul>	

### PHYSIOLOGY

OBJECTIVES	LEARNING STRATEGY
<ul style="list-style-type: none"> <li>Describe the function of male and female reproductive structures, hormones and their regulation</li> </ul>	Interactive Lecture

**PSYCHIATRY**

OBJECTIVES	LEARNING STRATEGY
<b>1. Management of male &amp; female sexual and reproductive dysfunction</b>	Interactive Lecture
• Describe the psychosocial issues associated with infertility	
• Describe ethical issues confronted by patients with infertility	
<b>2. Sexual and domestic violence</b>	
• List characteristics of people at increased risk for sexual assault	
• Describe the medical and psychosocial management of a victim of sexual assault	

**RADIOLOGY**

OBJECTIVES	LEARNING STRATEGY
<b>Role of ultrasound</b>	Interactive Lecture
• Describe the role of	
i. Ultrasound for the evaluation and diagnosis of different disorders in Gynae/Obs	
ii. Point of care ultrasound (POCUS) in Gynae and Obs	
iii. Doppler ultrasound in Gynae and Obs including antepartum fetal surveillance in the normal and high risk pregnancy & evaluation of fetal growth restriction	

**RESEARCH & SKILLS DEVELOPMENT CENTER**

OBJECTIVES	LEARNING STRATEGY
• Demonstrate the procedure of taking a pap smear	Small Group Discussion

**SURGERY**

OBJECTIVES	LEARNING STRATEGY
<b>Tumors of breast</b>	Interactive Lecture
• Discuss the clinical presentation of benign and malignant breast tumors	

**UROLOGY**

OBJECTIVES	LEARNING STRATEGY
<b>1. STIs in male genital tract; including epididymitis, orchitis, prostatitis</b>	Interactive Lecture
<ul style="list-style-type: none"> <li>Describe the etiology, pathophysiology, symptoms and signs, investigations and treatment plan for STIs in males (viz. Epididymitis ,orchitis, prostatitis gonorrhoea, non-specific urethritis, genital herpes, genital warts, syphilis and HIV)</li> </ul>	
<b>2. Male sexual dysfunction</b>	
<ul style="list-style-type: none"> <li>Explain the anatomy and physiology of penile erection</li> </ul>	
<ul style="list-style-type: none"> <li>Classify the causes of erectile dysfunction</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the various investigations for diagnosis of erectile dysfunction</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss the treatment options for Erectile dysfunction including penile implant</li> </ul>	
<b>3. Male Infertility</b>	
<ul style="list-style-type: none"> <li>Define infertility</li> </ul>	
<ul style="list-style-type: none"> <li>Describe the stages of spermatogenesis and fertilization</li> </ul>	
<ul style="list-style-type: none"> <li>List the causes of male infertility</li> </ul>	
<ul style="list-style-type: none"> <li>Discuss steps of evaluation of male infertility including history, examination and investigations</li> </ul>	
<ul style="list-style-type: none"> <li>Describe the treatment options for the common conditions causing male infertility</li> </ul>	

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



**LEARNING RESOURCES**

<b>SUBJECT</b>	<b>RESOURCES</b>
<b>ANATOMY</b>	<b>A. <u>GROSS ANATOMY</u></b> 1. K.L. Moore, Clinically Oriented Anatomy <b>B. <u>EMBRYOLOGY</u></b> 1. Keith L. Moore. The Developing Human 2. Langman's Medical Embryology
<b>COMMUNITY MEDICINE</b>	<b><u>TEXTBOOKS</u></b> 1. Community Medicine by Parikh 2. Community Medicine by M Ilyas 3. Basic <i>Statistics</i> for the Health Sciences by Jan W Kuzma
<b>OBSGYN</b>	<b><u>TEXT BOOK</u></b> 1. Obstetrics by Ten Teachers, Louise C. Kenny, Jenny E. Myers 2. Gynaecology by Ten Teachers, Louise Kenny, Helen Bickerstaff 3. Hacker & Moore's Essentials of Obstetrics and Gynecology 4. Textbook of Gynecology, Rashid Latif Khan 5. Fundamentals of Gynaecology, Dr Arshad Chohan
<b>PATHOLOGY/MICROBIOLOGY</b>	<b><u>TEXTBOOKS</u></b> 1. Robbins & Cotran, Pathologic Basis of Disease, 9 <sup>th</sup> edition. 2. RapidReviewPathology, 4 <sup>th</sup> edition by Edward F. Goljan MD
	<b><u>WEBSITES:</u></b> 1. <a href="http://library.med.utah.edu/WebPath/webpath.html">http://library.med.utah.edu/WebPath/webpath.html</a> 2. <a href="http://www.pathologyatlas.ro/">http://www.pathologyatlas.ro/</a>
<b>PHYSIOLOGY</b>	<b>A. <u>TEXTBOOKS</u></b> 1. Textbook Of Medical Physiology by Guyton And Hall 2. Ganong's Review of Medical Physiology 3. Human Physiology by Lauralee Sherwood 4. Berne & Levy Physiology 5. Best & Taylor Physiological Basis of Medical Practice



**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, assignment, practicals and the internal exam which will all have specific marks allocation.

**Formative Assessment**

Individual department may hold quiz or short answer questions to help students assess their own learning.

The marks obtained are not included in the internal evaluation

**For JSMU Examination Policy, please consult JSMU website!**

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



**LNH&MC EXAMINATION RULES & REGULATIONS**

- Student must report to examination hall/venue, 30 minutes before the exam.
- **Exam will begin sharp 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 examination hall.**
- If any student is found with cell phone in any mode (silent, switched off or on) he/she will be not be allowed to continue their exam.
- No students will be allowed to sit in exam without University Admit Card, LNMC College ID Card and Lab Coat
- Student 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	4TH YEAR	MONTH
8 WEEKS	NEUROSCIENCES II MODULE	February 14, 2022
		April 6, 2022
6 WEEKS	REPRODUCTIVE II MODULE	April 11, 2022
		May 28, 2022
4 WEEKS	ENDOCRINOLOGY II MODULE	May 2022*
		June 2022*
<b>Mid Term Examination*</b>		

\*Final dates will be announced later

