Competency-Based Dynamic Curriculum for MD/ MS Unani
(PRESCRIBED BY NCISM)
Semester II
Applied Basics of Amraze Niswan wa Qabalat
(Gynaecology and Obstetrics)
(SUBJECT CODE : UNIPG-AB-ANQ)

(Applicable from 2024-25 batch, from the academic year 2024-25 onwards until further notification by NCISM)

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Preface

The postgraduate program in "Amraze Niswan wa Qabalat" (Gynaecology and Obstetrics) under the specialty of M.S. in Amraze Niswan wa Qabalat in the Unani System of Medicine is designed to address the growing need for skilled professionals in women's health. This program integrates the principles of Unani medicine with modern scientific and technological advancements to train future consultants who can adeptly manage a broad spectrum of gynaecological and obstetric conditions. Recognizing the significant impact of maternal and perinatal morbidity and mortality, the program aims to develop specialists proficient in traditional and contemporary approaches to reproductive health care.

The program's vision extends beyond clinical expertise, aiming to cultivate healthcare professionals as educators, researchers, communicators, counsellors, and entrepreneurs. The curriculum is structured around a competency-based approach, ensuring that graduates are equipped not only with clinical skills but also with leadership, innovation, and public health acumen. By integrating Unani concepts such as Arkān (elements), Mizāj (temperament), Akhlāṭ (humors), Aʻḍā' (organs), Arwāḥ (pnuema), Quwā (faculties), Afʻāl (functions) and Asbāb Sitta Ḍarūriyya (six essential factors) with contemporary medical research, students gain a holistic understanding of women's health and personalized treatment methodologies. The academic structure encompasses in-depth study across multiple disciplines, including anatomy, physiology, pharmacology, pathology, endocrinology, medical genetics, microbiology, and reproductive health. Special emphasis is placed on the physiological and pathological aspects of female reproduction, covering ovulation, menstruation, fertilization, pregnancy, and neonatology. Students are trained in the diagnosis, treatment, and management of obstetric and gynaecological disorders, ensuring a comprehensive understanding of both preventive and curative care.

Clinical training forms a crucial component of the program, with students participating in rotations covering routine and high-risk obstetric cases. Practical exposure is supplemented with simulation-based learning, enabling students to refine their diagnostic, surgical, and decision-making skills in real-world scenarios. Training in modern diagnostic techniques such as cytology, histopathology, immunology, and biochemistry ensures a seamless integration of Unani and contemporary medical knowledge. Furthermore, the exploration of medical genetics provides insights into hereditary influences on reproductive health, fostering a deeper understanding of preventive and personalized medicine. In addition to clinical excellence, the program emphasizes the development of soft skills, including patient communication, empathy, and counselling. Graduates are prepared to take on leadership roles in clinical settings, academia, and public health initiatives. Research and innovation are integral to the curriculum, encouraging students to engage in original studies that contribute to the advancement of women's health. Entrepreneurial training further equips graduates with the skills needed to pioneer new therapeutic interventions and establish healthcare ventures that bridge traditional and modern medical approaches.

The syllabus also incorporates a strong public health focus, preparing students to address community-level reproductive health challenges. Graduates will be equipped to advocate for maternal and child health policies, contribute to public health programs, and work toward reducing disparities in healthcare access. Ultimately, this comprehensive curriculum ensures that graduates emerge as well-rounded professionals, combining Unani wisdom with modern medical advancements to enhance women's health on a global scale.

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NCISM
(NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE)
Competency-Based Dynamic Curriculum for MD/ MS Unani
Applied Basics of Amraze Niswan wa Qabalat (UNIPG-AB-ANQ)
Summary & Credit Framework

Semester II

Module Number & Name	Credits	Notional Learning Hours	Maximum Marks of assessment of modules (Formative Assessment)
M 1. زنانہ اعضاء تناسلیہ، جوف عانہ اور ممحمہ ءِ جنین کی اطلاقی تشریح وعمومی جائزہ Overview of anatomy and applied anatomy of female genital organ, pelvic cavity and fetal skull	2	60	50
M 2. اعضاءِ تولید کا منافع الاعضائی بیان، سریریاتی ماہیت مرضی اور مناعت کا اطلاقی بیان Applied Physiology of reproductive organs, Clinical Pathophysiology & Applied aspects of Immunology	2	60	50
M 3. طبعی نظام تولید (علم جنین اور اس کا ارتقاء) Physiology of reproduction (Embryology)	2	60	50
M 4. بلوغت، حمل، وضع حمل، نفاس اور انقطاع حیض کے دوران زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحاتی تغیرات Physiological and anatomical changes in female genital tract during puberty, Pregnancy, Labour,Puerperium and menopause	2	60	50
M 5. نظامِ تولید زنانہ سے متعلق نظام لاقنائی Endocrinology related to female reproductive system	2	60	50
M 6. امراض نسواں و قبالہ کے مبادیات اور ان میں مستعمل یونانی اصول و ضوابط Unani fundamental principles applied in Amrāze Niswān wa Qabālat	2	60	50
M 7. امراض نسواں و قبالہ میں مستعمل خلوی و نسیجی تشریح Cytology and Histopathology in Amrāze Niswān wa Qabālat	2	60	50
M 8. امراض نسواں و قبالہ میں علم احیاء دقیقہ، کیمیاء حیاتی اور علم الجینیات کا بیان Clinical Microbiology, Applied Biochemistry and Applied Medical Genetics in Amrāze Niswān wa Qabālat	2	60	50
	16	480	400

Credit frame work

UNIPG-AB-ANQ consists of 8 modules totaling 16 credits, which correspond to 480 Notional Learning Hours. Each credit comprises 30 hours of learner engagement, distributed across teaching, practical, and experiential learning in the ratio of 1:2:3. Accordingly, one credit includes 5 hours of teaching, 10 hours of practical training, 13 hours of experiential learning, and 2 hours allocated for modular assessment, which carries 25 marks.

Important Note: The User Manual MD/MS Unani is a valuable resource that provides comprehensive details about the curriculum file. It will help you understand and implement the curriculum. Please read the User Manual before reading this curriculum file. The curriculum file has been thoroughly reviewed and verified for accuracy. However, if you find any discrepancies, please note that the contents related to the MSE should be considered authentic. In case of difficulty and questions regarding the curriculum, write to syllabus24uni@ncismindia.org.

Course Code and Name of Course

Course code	Name of Course
UNIPG-AB-ANQ	Applied Basics of Amraze Niswan wa Qabalat (Gynaecology and Obstetrics)

Table 1 : Course learning outcomes and mapped Program learning outcomes

CO No	A1 Course learning Outcomes (CO) UNIPG-AB-ANQ At the end of the course UNIPG-AB-ANQ, the students should be able to	B1 Course learning Outcomes mapped with program learning outcomes.
CO1	Demonstrate mastery in applying Unani principles for Asbāb-o-Aghrāz (etiology), Tashkhiṣ (diagnosis), and patient assessment in Amrāz-e Niswān wa Qabālat (gynecology and obstetrics).	PO1,PO2,PO4,PO8
CO2	Lead interdisciplinary and transdisciplinary research integrating Unani principles with Anatomy, Physiology, biochemistry, microbiology, Endocrinology, Medical Genetics and biomedical sciences to advance global healthcare.	PO1,PO4,PO5,PO6
CO3	Demonstrate Promotive, Preventive and Rehabilitative health initiatives using Tahaffuzi wa Samaji Tib principles, 'Ilāj bi'l Ghidhā' (dietetics), Ilāj bi'l Tadbīr (regimenal therapies) and lifestyle modifications aligned with Unani health strategies to provide personalised health care/medicine.	PO2,PO3,PO4,PO6
CO4	Provide care by integrating Unani principles with contemporary diagnostic, management, and counseling methods in Amrāz-e Niswān wa Qabalat	PO2,PO3,PO4,PO5
CO5	Apply advanced Unani and recent practices in managing pregnancy, labor, and neonatal care to ensure optimal maternal and fetal health outcomes.	PO1,PO3,PO4,PO5
CO6	Apply advanced diagnostic tools/methods and perform critical interventions for complex pregnancies through Unani and Scientific advance methods.	PO2,PO4,PO5,PO6,PO8
CO7	Address ethical issues, embrace lifelong learning, and integrate emerging technologies, developing entrepreneurship, teaching skills and participating in National health program/Public health initiative in Amraze Niswan wa Qabālat.	PO2,PO6,PO7

Table 2 : Course contents (Modules- Credits and Notional Learning Hours)

2A Module Number	2B Module & units	2C Number of Credits	Notional Learning Hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
1	**M-1 زنانہ اعضاء تناسلیہ، جوف عانہ اور جنین کی اطلاقی تشریح وعمومی جائزہ Overview of anatomy and applied anatomy of female genital organ, pelvic cavity and fetal skull** This module contains a description of the anatomy of the female genital organs, pelvic cavity, and fetal skull; variations and applied anatomical aspects of female genital organs along with their relation with other pelvic organs; and anatomical basis of various procedures over female genital organs. • **M1.U1** فرج اور مجاورات فرج کی تشریح اور اطلاقی بیان Anatomy and applied aspects of Vulva with surrounding structures 1.1.1 Anatomy, applied anatomy and clinical significance 1.1.2 Anatomical variations 1.1.3 Examination techniques • **M1.U2** مہبل کی تشریح اور اطلاقی بیان Anatomy and applied aspects of vagina 1.2.1 Anatomy, applied anatomy and clinical significance 1.2.2 Examination techniques 1.2.3 Anatomical variations 1.2.4 Anatomical peculiarities of various procedures	2	10	20	30	60

	• **M1.U3** رَحم اور عنق رحم کی تشریح اور اطلاقی بیان Anatomy and applied aspects of uterus and cervix 1.3.1 Anatomy, applied anatomy and clinical significance 1.3.2 Anatomical variations 1.3.3 Examination techniques & pelvic examination • **M1.U4** مبیضین اور قاذفین کی تشریح اور اطلاقی بیان Anatomy and applied aspects of Ovary and Fallopian Tubes 1.4.1 Anatomy, applied anatomy and clinical significance 1.4.2 Examination techniques 1.4.3 Anatomical variations 1.4.4 Anatomical basis of various procedures • **M1.U5** فرشِ عانہ، جوفِ عانہ اور حجمہ جنین کی تشریح Anatomy of the pelvic diaphragm, pelvic cavity and fetal skull 1.5.1 Anatomy, applied anatomy and clinical significance 1.5.2 Examination techniques 1.5.3 Anatomical variations 1.5.4 Clinical pelvimetry					
2	**M-2 اعضاءِ تولید کا منافع الاعضائی بیان، سریریاتی ماہیت مرضی اور مناعت کا اطلاقی بیان Applied Physiology of reproductive organs, Clinical Pathophysiology & Applied aspects of Immunology**	2	10	20	30	60

	This module is related to physiological and pathophysiological changes of female reproductive organs including ovaries, uterus, fallopian tube and vagina as well as applied aspect of the immunology in Amrāze Niswān wa Qabālat • **M2.U1** Unit-1: مبیضین، قاذفین، رحم اور مہبل کے طبعی افعال واطلاقی بیان Physiology of ovary, fallopian tube, uterus and vagina and its applied aspect 2.1.1 Folliculogenesis & ovulation 2.1.2 Formation, maturation and degeneration of corpus luteum 2.1.3 Ovarian hormone synthesis and applied physiology 2.1.4 Normal and abnormal vaginal environment • **M2.U2** دورہ طمث کا میکانیہ اور اس کا اطلاقی بیان Physiology of menstruation and its applied aspects 2.2.1 Menstrual cycle and its abnormalities 2.2.2 Diagnosis of menstrual disorders • **M2.U3** اعضاءِ تولید کی ماہیت مرضی کا سریر یاتی بیان Clinical Pathophysiology of female reproductive organs 2.3.1 Pathological changes in female genital organs, diagnosis and assessment • **M2.U4** امراض نسواں و قبالہ میں مناعت کا اطلاقی پہلو Applied aspects of Immunology in Amrāze Niswān wa Qabālat 2.4.1 Immunological infertility 2.4.2 Rh iso-immunization and ABO incompatibility 2.4.3 Immunological causes of abortion 2.4.4 Immunology-based investigations					

3	**M-3 (طبعی نظام تولید (علم جنین اور اس کا ارتقاء Physiology of reproduction (Embryology)** This module is related with the physiology of reproduction including gametogenesis, implantation and early embryonic development, placenta formation, fetal growth along with changes after birth and lactation. • **M3.U1** تبویض اور بار آوری Gametogenesis and fertilization 3.1.1 Oogenesis 3.1.2 Spermatogenesis 3.1.3 Fertilization • **M3.U2** تنصیبِ جنین اور ابتدائی مرحلہ ارتقاء Implantation & early embryonic development 3.2.1 Definitions, phases and clinical implications of Implantation 3.2.2 Embryonic development. • **M3.U3** زنانہ اعضاءِ تولید کے خلقی نقائص Anomalies in genital tract development 3.3.1 Development of genital tract 3.3.2 Genital tract anomalies & its applied aspect • **M3.U4** تکوینِ مشیمہ، ارتقاء جنین اور دوران ولادت واقع ہونے والے تغیرات Placenta formation & fetal development and growth and changes at birth 3.4.1 Placenta development 3.4.2 Abnormalities of placenta 3.4.3 Fetal development and changes after birth	2	10	20	30	60

	• **M3.U5** رضاعت کا طبعی بیان Physiology of Lactation 3.5.1 Physiology of lactation. 3.5.2 Causes and factors affecting milk production 3.5.3 Issues related to lactation					
4	**M-4 بلوغت، حمل، وضع حمل، نفاس اور انقطاع حیض کے دوران زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحاتی تغیرات Physiological and anatomical changes in female genital tract during puberty, Pregnancy, Labour,Puerperium and menopause** This module contains detailed description of physiological and anatomical changes in female genital tract during puberty, pregnancy, labour, puerperium and menopause for application in understanding and identification of abnormalities. • **M4.U1** دوران بلوغت و مراھقہ زنانہ اعضاءِ تناسلیہ میں لاحق ہونے والے منافع الاعضائی و تشریحاتی تغیرات Physiological and anatomical changes in female genital tract during puberty and adolescence 4.1.1 Changes in female genital tract during Puberty and adolescence • **M4.U2** دوران حمل اور وضع حمل زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحاتی تغیرات Physiological and anatomical changes in female genital tract during Pregnancy and Partum 4.2.1 Changes in female genital tract during Pregnancy • **M4.U3** دوران نفاس زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحاتی تغیرات Physiological and anatomical changes in female genital tract during Puerperium 4.3.1 Changes in female genital tract during Puerperium • **M4.U4** محیطِ سنواتِ انقطاع حیض اور انقطاع حیض کے دوران زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحاتی تغیرات Physiological and anatomical changes in female genital tract during climacteric and menopause. 4.4.1 Changes in female genital tract during climacteric and menopause	2	10	20	30	60

5	**M-5 نظامِ تولیدِ زنانہ سے متعلق نظام الاقتالی Endocrinology related to female reproductive system** This module focuses on hormones which are responsible for female health particularly in regulating from Puberty, menstrual cycles, fertility, and pregnancy till menopause. Hormonal interplay among the hypothalamus, pituitary gland, ovaries, and uterus is essential for ovulation and menstruation and fertilization, pregnancy after that menopause. Disorders in hormonal balance which leads conditions like polycystic ovarian syndrome (PCOS), endometriosis and menopause and Applied aspects of endocrinology in the female health system including Placental hormone. • **M5.U1** زیرعرشی۔غدہ نخاعیہ۔ میضین کے سبیل کا منافع الاعضائی بیان Physiology of Hypothalamo-Pituitary-Ovarian Axis 5.1.1 Component of hypothalamo- pituitary and ovarian (H-P-O) axis, its applied physiology and feedback mechanisms (positive and negative feedback) 5.1.2 Disorders related to hypothalamo- pituitary and ovarian(H-P-O) axis • **M5.U2** تولیدی ہارمون کے افعال Role of reproductive Hormones 5.2.1 Overview of reproductive hormone 5.2.2 Hormonal changes from puberty to menopause 5.2.3 Clinical examination and history-taking 5.2.4 Hormonal profiles in normal and abnormal conditions • **M5.U3** مشیماتی ہارمون Placental Hormones 5.3.1 Physiological roles of placental hormones 5.3.2 Impact of environmental factors on placental function	2	10	20	30	60

6	**M-6 امراض نسواں و قبالہ کے مبادیات اور ان میں مستعمل یونانی اصول و ضوابط Unani fundamental principles applied in Amrāze Niswān wa Qabālat** This module is based on fundamental principles of Unani medicine in Amrāze Niswān wa Qabālat and its application in understanding the pathogenesis of diseases in Amrāze Niswān wa Qabālat • **M6.U1** اعضاء تناسلیہ سے متعلق امور طبیعیہ کی اہمیت Importance of Umūr Ṭabī‘iyya concerning A’da’ Tanasuliyya 6.1.1 Concept of Arkān, Mizāj, Akhlāt, A‘dā’, Arwāh, Quwā and Af‘āl in understanding the Amrād-i Niswān wa Qabālat • **M6.U2** کلیاتِ امراض نسواں و قبالہ اور اس کے اسباب، اغراض و اقسام Kulliyāt Amraze Niswan wa Qabalat wa Asbāb-o-Aghrāz wa Aqsaam 6.2.1 Types of waram in Amrād-i Niswān (Amrād zahirah wa batina, Amrād asliya wa shirkiya, Amrād Muzminā wa hāddā) 6.2.2 Nabd, Bawl wa Baraz • **M6.U3** زنانہ اعضاء تناسلیہ کی صحت میں اسباب ستہ ضروریہ و غیر ضروریہ کی اہمیت Asbāb Sitta Zaruriyya wa ghair Zaruriyya in female reproductive health 6.3.1 Asbāb Sitta Zaruriyya wa ghair Zaruriyya in the context of female reproductive health	2	10	20	30	60
7	**M-7 امراض نسواں و قبالہ میں مستعمل خلوی و نسیجی تشریح Cytology and Histopathology in Amrāze Niswān wa Qabālat** This module emphasize on the basic and advanced applied aspects of cytology and histology in the field of Amraze niswan wa qabalat with a comprehensive understanding of the cellular and histological structures relevant to women's health . Students will explore the clinical significance of cytological and histological techniques in diagnosing and monitoring various Amraze niswan wa Qabalat conditions. • **M7.U1** امراض نسواں و قبالہ میں مستعمل خلوی تشریح Cytology in Amrāze Niswān wa Qabālat	2	10	20	30	60

	7.1.1 Key concepts 7.1.2 Techniques types 7.1.3 Clinical correlations • **M7.U2** امراض نسواں و قبالہ میں مستعمل نسیجی تشریح Histopathology in Amrāze Niswān wa Qabālat 7.2.1 Normal and abnormal histology of female reproductive organ, 7.2.2 Impact of histological techniques in the screening, diagnosis					
8	**M-8 امراض نسواں و قبالہ میں علم احیاء دقیقہ، کیمیاء حیاتی اور علم الجینیات کا بیان Clinical Microbiology, Applied Biochemistry and Applied Medical Genetics in Amrāze Niswān wa Qabālat** This module integrates essential concepts from clinical microbiology, biochemistry, and genetics, focusing on their applications in gynecology and obstetrics. Module focuses on infections specific to obstetrics and gynecology, including STIs, PID, maternal-fetal and emphasis is placed on diagnostics, microbial pathogenesis, examines the biochemical changes during gyne. and obst. stages, explores genetic screening, prenatal diagnosis, and hereditary conditions affecting maternal and fetal health. Through this module the students will get a good understanding with disease mechanisms, diagnostic approaches, and genetic aspects related to women's health • **M8.U1** امراض نسواں و قبالہ میں سریریاتی و اطلاقی علم احیاء دقیقہ کا بیان Clinical microbiology applied to investigations for Amrāze Niswān wa Qabālat 8.1.1 Basic applied microbiology 8.1.2 Laboratory diagnostics methods 8.1.3 Specimen collection techniques 8.1.4 Significance of microbiological findings	2	10	20	30	60

	• **M8.U2** اطلاقی حیاتیاتی کیمیاء (اعضاء تولید زنانہ کی صحت و مرض کی حیاتیاتی کیمیائی اساس) Applied Biochemistry (Biochemical basis of female reproductive health and diseases) 8.2.1 Biochemical markers and tests 8.2.2 Applied knowledge of genetic and molecular biochemistry • **M8.U3** امراض نسواں و قبالہ سے متعلق اطلاقی طبی جینیات کا بیان applied Medical Genetics in Amrāze Niswān wa Qabālat 8.3.1Chromosomes 8.3.2 Mechanisms behind chromosomal abnormalities (numerical and structural) 8.3.3 Prenatal screening and diagnostic tests 8.3.3.1Chorionic villus sampling (CVS), 8.3.3.2 Amniocentesis 8.3.3.3 Non-invasive prenatal testing (NIPT). 8.3.4 Genetic implications in Amraz e niswan					
		16	80	160	240	480

Table 3 : Modules - Unit - Module Learning Objectives and Session Learning Objective- Notional Learning Hours- Domain-Level- TL Methods

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 1 : زنانہ اعضاء تناسلیہ، جوف عانہ اور مجمہ ءِ جنین کی اطلاقی تشریح وعمومی جائزہ Overview of anatomy and applied anatomy of female genital organ, pelvic cavity and fetal skull						
Module Learning Objectives **(At the end of the module, the students should be able to)** 1. Describe the normal anatomy of female genital organs 2. Identify the various anatomical abnormalities and changes in the female genital organs 3. Discuss the anatomical relations of female genital organs 4. Apply the knowledge of anatomy of female genital organs in various procedures						
Unit 1 فرج اور مجاورات فرج کی تشریح اور اطلاقی بیان Anatomy and applied aspects of Vulva with surrounding structures 1.1.1 Anatomy, applied anatomy and clinical significance 1.1.2 Anatomical variations 1.1.3 Examination techniques **References:** 1,2,3,4,5,6,7,8						
CO1	Describe the anatomical structure, embryological development, vascular supply, innervation, and lymphatic drainage of the vulva, along with its anatomical relations to	2	Lecture	CC	Knows-how	DIS,FC,L &PPT ,L_VC

	pelvic structures, common anatomical variations, age-related changes, and abnormalities in development.					
CO1	Demonstrate vulval examination and the anatomical peculiarities of various vulval procedures.	2	Practical1.1	PSY-GUD	Shows-how	D-BED,D-M,L_VC,TUT
CO1	Perform vulval examination to identify normal and abnormal anatomy, understand the anatomical considerations of surgical procedures on the vulva, and analyze clinical cases involving vulvar pathologies to correlate applied anatomy with clinical manifestations.	5	Experiential - Learning1.1	PSY-MEC	Does	CBL,D-BED,D-M,PER,RP,SIM,TUT

Unit 2 مہبل کی تشریح اور اطلاقی بیان Anatomy and applied aspects of vagina

1.2.1 Anatomy, applied anatomy and clinical significance

1.2.2 Examination techniques

1.2.3 Anatomical variations

1.2.4 Anatomical peculiarities of various procedures

References: 5,6,7

3A	3B	3C	3D	3E	3F	3G
CO1	Describe the normal and abnormal development of the vagina, its anatomical relation along with anatomical variations and morphological changes with age.	1	Lecture	CC	Knows-how	FC,L&PPT ,L_VC
CO1	Demonstrate the vaginal examination and understand the anatomical peculiarities of various procedures in vagina .	3	Practical1.2	PSY-GUD	Shows-how	D-BED,D-M,SIM
CO1	Perform vaginal examinations to differentiate normal and abnormal anatomy, and apply anatomical knowledge to perform various diagnostic and therapeutic vaginal procedures.	4	Experiential - Learning1.2	PSY-MEC	Does	CBL,D-BED,D-M,PBL,SIM

Unit 3 رَحِم اور عنق رحم کی تشریح اور اطلاقی بیان Anatomy and applied aspects of uterus and cervix

1.3.1 Anatomy, applied anatomy and clinical significance

1.3.2 Anatomical variations

1.3.3 Examination techniques & pelvic examination

References: 2,5,6

3A	3B	3C	3D	3E	3F	3G
CO1	Describe the normal and abnormal development of the uterus and cervix, anatomical relations, various anatomical abnormalities and changes with age.	3	Lecture	CC	Knows-how	L,L&PPT,L_VC,SY
CO1	Demonstrate pelvic examination techniques to assess the uterus and cervix, identifying key anatomical landmarks and variations, and explain the anatomical peculiarities and their implications in various clinical procedures involving these structures.	5	Practical1.3	PSY-GUD	Shows-how	D-BED,D-M,SIM
CO1	Perform per speculum, digital, and bimanual examinations to diagnose normal and abnormal pelvic anatomy, correlate anatomical findings with imaging modalities used in gynecology and obstetrics, and explain the anatomical relations relevant to procedures involving the uterus and cervix.	3	Experiential - Learning1.3	PSY-MEC	Does	CBL,D-BED,D-M,SIM
CO1	Analyze the anatomical basis of common gynecological conditions (e.g., fibroids, prolapse, endometriosis).	3	Experiential - Learning1.4	PSY-MEC	Does	CD,CBL,D-M,DIS,PER

Unit 4 بیضین اور قاذفین کی تشریح اور اطلاقی بیان Anatomy and applied aspects of Ovary and Fallopian Tubes

1.4.1 Anatomy, applied anatomy and clinical significance

1.4.2 Examination techniques

1.4.3 Anatomical variations

1.4.4 Anatomical basis of various procedures

References: 5,6,7

3A	3B	3C	3D	3E	3F	3G
CO1	Describe the normal and abnormal development of the fallopian tubes and ovaries, including anatomical relations, andexplain the various anatomical abnormalities and age-related changes.	2	Lecture	CC	Knows-how	L&PPT,L_VC
CO1	Demonstrate the anatomical basis of various procedures over fallopian tube and ovary (Salpingotomy, salpingectomy, tubal ligation, Tubal blockage, Fertiloscopy, Hysterosalpingography, Sonosalpingography, Tubal patency tests, ovarian drilling, oophorectomy)	5	Practical1.4	PSY-GUD	Shows-how	D-BED,D-M,L_VC,SIM,TUT
CO1	Identify the anatomical structures of the fallopian tubes and ovaries, correlate them with clinical scenarios, and apply this knowledge in diagnostic procedures and imaging techniques.	3	Experiential - Learning1.5	PSY-MEC	Does	CBL,D-M,DIS,SIM
CO1	Demonstrate precise anatomical modeling of the ovary and fallopian tubes, highlighting their spatial arrangement, functional relationships, and clinical significance.	3	Experiential - Learning1.6	PSY-MEC	Does	CD,CBL,D-M

Unit 5 فرشِ عانہ، جوفِ عانہ اور مجمہ جنین کی تشریح Anatomy of the pelvic diaphragm, pelvic cavity and fetal skull

1.5.1 Anatomy, applied anatomy and clinical significance

1.5.2 Examination techniques

1.5.3 Anatomical variations

1.5.4 Clinical pelvimetry

References: 8,10,11

3A	3B	3C	3D	3E	3F	3G
CO1	Describe the normal anatomical structures of the pelvic cavity and maternal pelvis, including their functional significance about childbirth.	2	Lecture	CC	Knows-how	L&PPT,L_VC
CO1	Identify and examine the anatomy of the fetal skull in relation to the pelvic dimensions and perform practical assessments of the fetal skull's presentation and engagement within the maternal pelvis using models or clinical scenarios.	5	Practical1.5	PSY-GUD	Shows-how	D,D-BED,D-M,SIM

CO1	Perform a comprehensive pelvic assessment, including external and internal examinations, to evaluate pelvic shape, size, and capacity, and demonstrate the use of clinical pelvimetry to assess the dimensions of the pelvic inlet, midpelvis, and outlet, correlating these findings with their clinical implications for labor and delivery.	5	Experiential - Learning1.7	PSY-MEC	Does	CBL,D-BED,SIM

Practical Training Activity

Practical 1.1 : Vulval examination & Procedures

Total learning hours (2 hours)

1. Demonstration on Patient Bedside (30 Minutes):
The session begins with a teacher-led bedside demonstration (with patient consent and appropriate draping) of vulval examination. The teacher explains how to approach the patient respectfully, obtain consent, and ensure privacy. The examination includes inspection and palpation of vulval structures such as the labia majora and minora, clitoris, urethral meatus, Bartholin's glands, and perineum. Key findings like inflammation, ulceration, pigmentation, discharge, or masses are pointed out. Emphasis is placed on recognizing normal vs pathological appearances and respecting patient dignity throughout.

2. Demonstration on Anatomical Model (30 Minutes):
Following the live demonstration, a detailed anatomical model of the vulva is used for hands-on explanation and practice. The teacher explains anatomical landmarks, variations in appearance, and changes due to age, childbirth, or hormonal status. Students observe and later practice identification of key structures and simulate steps like inspection, swab collection, and palpation of glands. This model-based learning ensures clarity of anatomical orientation and safe practice before real patient interaction.

3. Lecture with Video Clips (30 Minutes):
A short lecture is conducted using high-quality clinical video clips that demonstrate normal vulval anatomy, common pathologies (e.g., vulvitis, Bartholin's cyst, genital warts, lichen sclerosus), and procedures like swab collection, biopsy, and cryotherapy. These visuals enhance students' understanding of the dynamic aspects of examination and procedural care. Videos also show patient positioning, communication, and safety protocols in different age groups (e.g., pediatric vs adult cases).

4. Interactive Tutorial and Discussion (30 Minutes):
In the final 30 minutes, students participate in an interactive tutorial session where the teacher asks concept-check questions, shows clinical photos for diagnosis, and guides discussion on anatomical peculiarities that can affect procedures—such as labial fusion in children, postmenopausal atrophy, or variations in pigmentation. Students are encouraged to share their observations and clarify doubts. Ethical considerations and the importance of cultural sensitivity in vulval examinations are also discussed.

Practical 1.2 : Vaginal Examination

Total learning hours (3 hours)

1. Bedside Demonstration by Teacher (1 Hour):
The session begins with a live bedside demonstration by the teacher (with consent and proper draping) to show the correct technique of vaginal examination in a clinical

setting. Students observe how to obtain verbal consent, maintain privacy, use sterile technique, and follow the proper hand positioning and sequence during a per vaginal (PV) examination. The teacher highlights key landmarks like the cervix, vaginal fornices, vaginal walls, and pelvic floor tone. Common clinical findings such as prolapse, discharge, tenderness, or cervical motion pain are explained during the examination. This part helps the students correlate theoretical anatomy with real clinical presentation.

2. Demonstration on Pelvic Model (45 Minutes):
In the next segment, students gather around a pelvic anatomical model or simulator. The teacher demonstrates step-by-step how to perform a speculum examination, bimanual examination, and visual inspection of the cervix. Anatomical landmarks such as the anterior and posterior fornix, rugae, cervical os, and orientation of uterus (anteverted/retroverted) are clearly pointed out. Students then take turns practicing these steps on the model under supervision, ensuring correct technique and gentle handling, which improves their manual confidence before clinical exposure.

3. Simulation of Vaginal Procedures (45 Minutes):
In this session, students are divided into small groups and participate in simulation-based training using standardized models or virtual simulators (if available). They simulate basic vaginal procedures such as: insertion of vaginal speculum, Pap smear sampling, collection of high vaginal swabs, and insertion of vaginal pessary or tampon. The teacher provides real-time feedback and corrects hand movements and instrument handling. Anatomical peculiarities such as vaginal length, elasticity, atrophic changes in postmenopausal women, and challenges in nulliparous vs multiparous cases are discussed during the simulations.

4. Discussion and Debrief (30 Minutes):
The final part of the session includes a group discussion led by the teacher. Students reflect on their experience, ask questions, and clarify doubts about techniques or anatomical variations. The teacher emphasizes the importance of patient communication, hygiene, empathy, and cultural sensitivity during intimate examinations. Students are encouraged to share challenges they faced during simulation and how they can improve further.

Practical 1.3 : Pelvic Examination & Procedure

Total learning hours (5 hours)

1. Teacher's Bedside Demonstration – 60 minutes

The session will begin with a live bedside demonstration on a consenting patient or standardized patient. The teacher will demonstrate per speculum, digital, and bimanual examinations while explaining the normal and abnormal anatomical findings of the uterus and cervix. Key anatomical landmarks and their clinical significance will be emphasized.

2. Model-Based Demonstration – 60 minutes

Students will gather around anatomical models or pelvic mannequins as the teacher demonstrates the pelvic examination techniques once again. This includes insertion of a speculum, palpation techniques, and identification of uterine positions. Students will be encouraged to interact with the model under supervision.

3. Simulation-Based Hands-On Practice – 90 minutes

Students will rotate in small groups through simulation stations using high-fidelity pelvic simulators. They will perform speculum and bimanual examinations and receive real-time feedback from facilitators. Clinical scenarios such as retroverted uterus, cervical stenosis, or fibroids will be introduced for applied learning.

4. Clinical Correlation & Case-Based Discussion – 45 minutes

Using models, videos, and clinical images, the teacher will explain the implications of anatomical peculiarities in procedures like IUD insertion, cervical biopsy, hysteroscopy, and D&C. Students will discuss case vignettes that link anatomical variations to procedural challenges or complications.

5. Supervised Skill Practice & Feedback – 45 minutes

Students will be asked to individually demonstrate the pelvic examination on models or simulators, under direct observation. Constructive feedback will be provided on technique, identification of anatomy, communication, and patient comfort. This will help reinforce learning and prepare for real-patient interaction.

Practical 1.4 : Procedures related to fallopian tube and ovary

Total learning hours(5 hours)

1. Lecture with Video Clips (1 Hour):
The session begins with a lecture supported by video demonstrations of various gynecological procedures. Short, focused videos are shown to demonstrate Salpingotomy, Salpingectomy, Tubal Ligation, Tubal Patency Tests (like HSG and SSG), Fertiloscopy, and Ovarian Drilling. Each video is paused at key steps to explain the anatomical landmarks, such as the mesosalpinx, fimbriae, isthmus, ampulla, and ovarian cortex. Variations in tubal and ovarian anatomy due to congenital anomalies or pelvic adhesions are also highlighted.

2. Demonstration on Anatomical Models (1 Hour):
Using pelvic and reproductive organ models, the teacher demonstrates the anatomical positions and relations of the fallopian tubes and ovaries. The steps of procedures like tubal ligation (Pomeroy and Filshie clip methods), salpingectomy, oophorectomy, and laparoscopic access points are simulated on the models. Students are invited to examine the models to locate the infundibulopelvic ligament, mesovarium, tubo-ovarian angle, and ovarian fossa. This helps them visualize surgical approaches and understand anatomical safety zones to avoid vascular or nerve injury.

3. Bedside Demonstration / Case Review (1 Hour):
With appropriate patient consent and draping, the teacher presents a bedside case discussion of a patient undergoing evaluation or follow-up after one of the above procedures (e.g., post-laparoscopy, post-HSG). The teacher reviews real clinical case notes, sonography reports, or laparoscopy images. Clinical signs, symptoms, and relevant anatomical structures are discussed. If no live patient is available, a case-based slideshow or pre-recorded bedside video is used.

4. Simulation-Based Practice (1.5 Hours):
Students are divided into small groups and participate in simulation exercises using laparoscopic trainers, virtual simulators, or silicone-based practice kits (if available). Each group practices mock procedures such as tubal ligation, chromopertubation for tubal patency testing, and ovarian drilling. Teacher guidance is provided on the anatomical rationale of every step—e.g., how to avoid damage to ovarian blood supply during drilling, or the relevance of fimbrial preservation in salpingotomy. Real-time feedback is given to students on instrument handling, anatomical identification, and simulated complication management.

5. Tutorial and Group Discussion (30 Minutes):
In the final session, students participate in a structured tutorial discussion. The teacher uses diagrams and clinical questions to reinforce key anatomical concepts. Students are asked to explain the anatomical basis behind common complications, such as post-ligation tubal recanalization, ovarian reserve loss after oophorectomy, or contrast spillage seen in HSG. Key structures like the broad ligament subdivisions, ovarian hilum, and pelvic vasculature are reviewed interactively. Students also receive a handout or worksheet to summarize the anatomical basis of each procedure discussed.

Practical 1.5 : Pelvimetry and fetal skull examination

Total learning hours(5 hours)

1. Demonstration of Fetal Skull Anatomy on Model (1 Hour):
The session begins with a detailed demonstration on a fetal skull model, where the teacher highlights essential anatomical landmarks including sutures (sagittal, coronal, lambdoid), fontanelles (anterior, posterior), vertex, occiput, sinciput, mentum, and biparietal diameter. Using a pelvic bone model, the teacher explains the relationship between fetal diameters (e.g., suboccipitobregmatic, occipitofrontal) and pelvic diameters (e.g., obstetric conjugate, transverse diameter). Variations in skull presentations—such as vertex, face, and brow—are demonstrated, and how each interacts with different pelvic shapes is explained.

2. Clinical Demonstration at Bedside or with Simulation Case (1 Hour):
In a bedside setting or using a high-fidelity obstetric manikin, the teacher demonstrates how to perform abdominal palpation (Leopold maneuvers) and vaginal examination to assess fetal presentation and engagement. The student observes identification of presenting part, position of the occiput, and station of the head in relation to the ischial spines. If a patient is not available, this demonstration is conducted using obstetric pelvis and fetal head simulators. The relationship of engagement to labor progression and cephalopelvic proportion is emphasized.

3. Hands-on Practice with Models (1.5 Hours):
Students are divided into small groups and rotate through stations with anatomical models. Each student practices identifying fetal skull landmarks and positioning the fetal head in the maternal pelvis model in various presentations. Students practice determining engagement using fetal head molds with marked sutures/fontanelles placed within pelvic models. Simulation exercises include performing vaginal examinations on models to identify fontanelles and assess position (LOA, ROA, OP, etc.). Teachers supervise, provide feedback, and guide correction of technique.

4. Simulation of Clinical Scenarios (1 Hour):
Next, students engage in clinical simulation exercises where they are given different labor scenarios—e.g., a woman in active labor with the fetus in occipitoposterior position

or brow presentation. Students must assess the fetal head engagement and presentation using simulator dummies or written case-based triggers. They report their findings and discuss management based on fetal head-pelvis compatibility. Emphasis is placed on clinical judgment, anatomical reasoning, and safe handling during examinations.

5. Tutorial Discussion and Assessment (30 Minutes):
In the final segment, a tutorial-style discussion is conducted. Students review their findings and challenges during simulation. The teacher revisits important anatomical concepts linking fetal head dimensions with pelvic adequacy and discusses how to recognize malpresentations early. A short quiz or worksheet is administered to reinforce learning outcomes. Key terms like caput succedaneum, molding, asynclitism, and engagement levels (0 station, +1, -2, etc.) are revised interactively with visuals and diagrams.

Experiential learning Activity

Experiential-Learning 1.1 : Clinical and Surgical evaluation

Total activity hours (5 hours)

1. Case-Based Learning (1.5 Hours):
Students analyze clinical cases like Bartholin's abscess and vulvar carcinoma. They identify anatomical structures involved, interpret findings, and discuss management based on anatomical understanding in small groups.

2. Bedside Demonstration (1 Hour):
Student will demonstrate vulval examination on a patient or video, explaining landmarks (labia, clitoris, Bartholin's glands, perineum) and abnormalities. Surgical relevance in drainage, biopsy, and vulvectomy is emphasized.

3. Model-Based Practice (1 Hour):
Students use anatomical models to practice identifying structures and simulating procedures like abscess drainage and swab collection. Key surgical landmarks and zones are reinforced.

4. Simulation & Clinical Scenarios (1 Hour):
Students role-play patient assessment and procedure planning (e.g., Bartholin's I&D, vulvectomy). Simulations help connect anatomy with surgical decision-making.

5. Tutorial & Presentations (30 Minutes):
Groups present one case, highlighting diagnosis, anatomy, and management. Teacher reviews applied anatomy: gland location, lymph drainage, and procedural points. Quick Q&A concludes the session.

Experiential-Learning 1.2 : Vaginal Examination & Procedural Skills

Total activity hours (4 hours)

1. Case based Learning (1 Hour):
Students are divided into groups and provided with clinical cases (e.g., vaginal prolapse, atrophic vaginitis, foreign body, vaginal cysts). They analyze symptoms, identify likely anatomical involvement, and suggest diagnostic steps or procedures (e.g., speculum exam, swab collection, biopsy).

2. Bedside Demonstration (45 Minutes):
Students will perform vaginal examination on a consenting patient or via video, highlighting steps like speculum insertion, visualization of vaginal walls, fornices, and cervix. Normal vs abnormal findings (e.g., discharge, masses, ulceration) and procedural steps like smear taking or biopsy are demonstrated.

3. Demonstration on Anatomical Model (45 Minutes):
Using a pelvic model, students are shown the vaginal canal's structure and its relation to cervix, bladder, and rectum. They practice speculum insertion, swab collection, and simulate common procedures (e.g., vaginal packing, pessary insertion) under supervision.

4. Simulation & Problem-Based Learning (1 Hour):
Students rotate through simulation stations, applying their anatomical knowledge to solve clinical problems—e.g., how to manage a retained vaginal foreign body, assess a bleeding lesion, or evaluate prolapse. They perform mock procedures using task trainers or simulation dummies.

5. Debrief and Tutorial (30 Minutes):
A group tutorial summarizes key concepts. Students reflect on anatomical insights, procedural techniques, and common errors. Teacher reinforces applied anatomy (vaginal fornices, muscular support, nerve supply) and answers queries from the simulation and model sessions.

Experiential-Learning 1.3 : P/V examination & imaging Interpretation

Total learning activity (3 hours)

1. Case-Based Learning and Discussion (45 Minutes):
Students analyze clinical cases such as fibroid uterus, cervical polyp, or pelvic inflammatory disease. Each case includes clinical findings along with USG or MRI reports. Students identify how imaging corresponds to anatomical landmarks and guides clinical examination and procedures.

2. Bedside Demonstration (45 Minutes):
The student will perform and demonstrates per speculum, digital, and bimanual pelvic examinations on a consenting patient or via video. Real-time anatomical interpretation is provided: assessing cervical position, uterine size, mobility, and vaginal wall abnormalities. Findings are correlated with prior imaging if available.

3. Simulation Practice on Models (1 Hour):
Students practice step-by-step pelvic exams (speculum, digital, bimanual) on anatomical pelvic models. They simulate identifying cervical lesions, bulky uterus, or adnexal masses. Emphasis is placed on uterine position (anteverted, retroverted) and anatomical relations during procedures like IUCD insertion, D&C, cervical biopsy, or endometrial sampling.

4. Tutorial on Anatomical Basis of Uterine & Cervical Procedures (30 Minutes):
Then the student will explain anatomical considerations in procedures like D&C, cervical cerclage, hysteroscopy, cervical biopsy, and IUCD insertion, including relations with bladder, rectum, uterine arteries, and peritoneal reflections. Anatomical diagrams and clinical case images are used for reinforcement.

Experiential-Learning 1.4 : Anatomical basis of common gyneacological conditions

Total activity hours(3 hours)

1. Case Diagnosis and Case-Based Learning (1 Hour):
Students are given clinical cases with symptoms, examination findings, and basic imaging (e.g., fibroid uterus with menorrhagia, stage 2 uterovaginal prolapse, endometriosis with dysmenorrhea). In groups, they analyze the cases to identify the condition and correlate it with the anatomical site of origin and spread.

2. Presentation and Peer Learning (30 Minutes):
Each group presents one case, describing the pathology, anatomical involvement, and clinical features. Peers provide feedback, and the teacher adds clarifications related to ligament support in prolapse, uterine wall layers in fibroids, or retrograde menstruation in endometriosis.

3. Demonstration on Pelvic Models (45 Minutes):
Using anatomical pelvic models, the teacher demonstrates key structural areas involved in each condition: myometrium in fibroids, uterosacral and cardinal ligaments in prolapse, pouch of Douglas and ovaries in endometriosis. Students observe and interact with models to reinforce understanding.

4. Group Discussion and Correlation (45 Minutes):
A structured discussion follows, where students reflect on how anatomical structures contribute to symptomatology, progression, and treatment options (e.g., myomectomy, hysterectomy, pelvic floor repair, laparoscopy for endometriosis). The discussion integrates imaging and surgical views when available.

Experiential-Learning 1.5 : Clinical and Surgical evaluation.

Total activity hours(3 hours)

1. Case-Based Learning (45 Minutes):
Students are presented with cases such as ectopic pregnancy, ovarian torsion, and tubal blockage-related infertility. They analyze symptoms, clinical findings, and imaging reports to identify the affected anatomical structures and their relevance in diagnosis.

2. Demonstration on Anatomical Models (45 Minutes):
Using pelvic and reproductive system models, the teacher demonstrates the anatomy of the fallopian tubes (infundibulum, ampulla, isthmus) and ovaries (cortex, medulla, ligament attachments). Emphasis is given to vascular supply, relations, and clinical access points for procedures.

3. Simulation Activity (45 Minutes):
Students engage in simulation-based scenarios where they localize pathology based on imaging (e.g., HSG, sonography) and clinical presentation. They simulate diagnostic approaches such as Hysterosalpingography (HSG), Sonosalpingography, or laparoscopy, using task trainers or software.

4. Group Discussion and Correlation (45 Minutes):
In a guided discussion, students reflect on how anatomical variations or pathology (e.g., hydrosalpinx, endometriotic cysts) affect diagnostic imaging and treatment. The teacher highlights how applied anatomy aids in planning IVF, tubal surgeries, or ovarian cystectomy.

Experiential-Learning 1.6 : Anatomical modeling of the ovary and fallopian tubes.

Total activity hours(3 hours)

1. Case based learning:Interactive Video Demonstration (60 minutes)

The session begins with an nstructional video providing an in-depth explanation of the anatomy, vascular supply, and clinical relevance of the ovary and fallopian tubes.
The video will highlight key anatomical structures, including: Ovarian ligament, Suspensory ligament of the ovary, Fimbriae, Ampulla, and infundibulum of the fallopian tube,
Blood supply from the ovarian and uterine arteries
Clinical correlations such as ectopic pregnancy, ovarian torsion, and pelvic inflammatory disease (PID) will be discussed to enhance clinical relevance.

2. Hands-on Learning with 3D Models and Charts (90 minutes)

Students will be divided into small groups and provided with 3D anatomical models and charts to:
Locate and identify key anatomical features.
Understand the spatial relationships between the ovary, fallopian tube, uterus, and adjacent structures.
Analyze cross-sectional imaging (CT/MRI/Ultrasound) or histological slides to observe anatomical variations.

Groups will compare their findings with clinical cases of: Ectopic pregnancy – Discuss its location in the fallopian tube and its impact.
Ovarian torsion – Evaluate how anatomical positioning can lead to vascular compromise.

3. Post-Activity Wrap-Up (30 minutes)
Each group will present their findings and share key learning points. A short quiz or case-based discussion will be conducted to assess understanding.
Summary of the clinical relevance, including early diagnosis and management of reproductive system disorders.

Students will be encouraged to reflect on their learning and discuss how anatomical knowledge translates into clinical practice.

Experiential-Learning 1.7 : Pelvic assessment

Total activity hours(5 hours)

1. Case-Based Learning and Clinical Correlation (1 Hour):
Students discuss clinical cases such as cephalopelvic disproportion (CPD), prolonged labor, or contracted pelvis. Each case includes obstetric history, labor progression, and imaging or examination findings. Students analyze how pelvic dimensions influence labor mechanics, fetal descent, and delivery planning (vaginal vs C-section).

2. Bedside Demonstration (1 Hour):
The student demonstrates external pelvic measurements (e.g., interspinous, intercristal, and external conjugate) and internal pelvic assessment (diagonal conjugate, sacral curve, ischial spines) on a consenting patient or via video. Pelvic types (gynecoid, android, etc.) and clinical relevance are explained.

3. Hands-on Practice with Pelvic Models (1.5 Hours):
Students practice external and internal pelvimetry using pelvic bone models and obstetric mannequins. They assess dimensions of the pelvic inlet, midpelvis, and outlet, and determine adequacy for fetal passage. Students also simulate determining station and engagement of the fetal head.

4. Simulation of Labor Scenarios (1 Hour):
Students work through simulation stations featuring labor cases with different pelvic types and fetal positions. They assess clinical pelvimetry findings and make decisions regarding labor management, trial of labor, or need for surgical intervention, based on pelvic capacity.

5. Tutorial and Recap (30 Minutes):
A group tutorial reviews key anatomical concepts of the bony pelvis, soft tissue, and their impact on labor. Teacher discusses limitations of clinical pelvimetry, importance of combining with imaging (e.g., X-ray pelvimetry), and encourages students to correlate anatomical knowledge with obstetric judgment.

Modular Assessment

Assessment method	Hour
Instructions: Conduct a structured modular assessment. Assessment will be for 50 marks . Keep a structured marking pattern. Use different method in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per table 6C 1. Presentation (25 marks) Content knowledge (10 marks): Understanding the anatomy of female genital organs and able to compare normal versus abnormal findings. Clarity (5marks) Response to the questions (10marks)	4

2. Case-base evaluation/problem-based evaluation: (25 marks) Each student will be given a case history or problem situation to diagnose the normal and abnormal anatomical findings in documentation followed by Viva Voce of perticular case. OR Any practical in converted form can be taken for assessment (25 marks) and Any experiential such as portfolios/reflection/presentations, can be taken as an assessment. (25 marks) Total marks 50	

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 2 : اعضاءِ تولید کا منافع الاعضائی بیان، سریریائی ماہیت مرضی اور مناعت کا طلائی بیان Applied Physiology of reproductive organs, Clinical Pathophysiology & Applied aspects of Immunology						
Module Learning Objectives **(At the end of the module, the students should be able to)** 1. Describe the physiology of female reproductive organs and immunological aspects of Amrāze Niswān wa Qabālat 2. Identify the abnormal functioning and pathophysiological changes of the female reproductive organs and to understand the role of immunology in Amrāze Niswān wa Qabālat 3. Interpret and assess the abnormalities for the diagnosis of various diseases of female reproductive organs						
Unit 1 Unit-1: میصبین، قاذفین، رحم اور مہبل کے طبعی افعال و اطلائی بیان Physiology of ovary, fallopian tube, uterus and vagina and its applied aspect 2.1.1 Folliculogenesis & ovulation 2.1.2 Formation, maturation and degeneration of corpus luteum 2.1.3 Ovarian hormone synthesis and applied physiology 2.1.4 Normal and abnormal vaginal environment **References:** 1,2,4,5,7,9,11						
3A	**3B**	**3C**	**3D**	**3E**	**3F**	**3G**
CO1,CO2,CO7	Describe and understand the physiology of ovary (folliculogenesis, ovulation, formation, maturation and degeneration of corpus luteal, ovarian hormone synthesis), fallopian tubes (functions of fallopian tubes), uterus and vagina (normal vaginal flora and pH)	3	Lecture	CC	Knows-how	DIS,FC,L&PPT

CO1,CO2,CO7	Demonstrate the normal and abnormal follicular growth, anovulation, abnormal ovarian hormone synthesis and differentiate the normal and abnormal vaginal environment	4	Practical2.1	PSY-GUD	Shows-how	CBL,D-BED,DL,LRI
CO1,CO2,CO7	Perform ultrasound assessment of follicular growth and ovulation, and conduct vaginal pH testing, whiff test, and wet mount microscopy for evaluating the vaginal environment.	5	Experiential-Learning2.1	PSY-GUD	Does	CBL,D-BED,PBL

Unit 2 دورہ طمث کا میکانیہ اور اس کا اطلاقی بیان Physiology of menstruation and its applied aspects

2.2.1 Menstrual cycle and its abnormalities

2.2.2 Diagnosis of menstrual disorders

References: 1,2,3,4,5,12,13,18,19,21,25,27

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO7	Describe menstrual cycle and its abnormalities	2	Lecture	CC	Knows-how	FC,L&PPT
CO1,CO2,CO7	Examine the physiological processes and hormonal regulation of menstruation, and evaluate clinical cases of menstrual irregularities by applying physiological concepts to diagnose underlying causes and interpret relevant diagnostic findings.	6	Practical2.2	PSY-GUD	Shows-how	CBL,D,DIS,JC,PER
CO1,CO2,CO7	Explore and explain the physiological mechanism of menstruation, compare different menstrual cycle abnormalities, and determine the clinical implications of these conditions through diagnostic evaluation.	4	Experiential-Learning2.2	PSY-ADT	Does	CD,CBL,LRI,PER,TUT
CO1,CO2,CO7	Demonstrate the physiological process of menstruation.	4	Experiential-Learning2.3	PSY-ADT	Does	CBL,D-BED,D-M,DIS

Unit 3 اعضاءِ تولید کی ماہیت مرضی کا سریر یائی بیان Clinical Pathophysiology of female reproductive organs

2.3.1 Pathological changes in female genital organs, diagnosis and assessment

References: 1,2,3,5,6,8,9,10,12,13,14,15,16,18,19,20

3A	3B	3C	3D	3E	3F	3G

CO1,CO2,CO7	Describe the pathological changes in female genital organs	2	Lecture	CC	Knows-how	FC,L&PPT
CO1,CO2,CO7	Demonstrate the pathological changes in female genital organs	5	Practical2.3	CAN	Shows-how	D-BED,LRI,PER,W
CO1,CO2,CO7	Demonstrate proficiency in identifying, assessing, and diagnosing pathological changes in female genital organs.	7	Experiential-Learning2.4	PSY-MEC	Does	CBL,LRI,SIM

Unit 4 امراض نسواں و قبالہ میں مناعت کا اطلاقی پہلو Applied aspects of Immunology in Amrāze Niswān wa Qabālat

2.4.1 Immunological infertility

2.4.2 Rh iso-immunization and ABO incompatibility

2.4.3 Immunological causes of abortion

2.4.4 Immunology-based investigations

References: 1,2,13,14,15,16,17,18,20

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO7	Discuss the concept of immunology in Amrāze Niswān wa Qabālat (Immunological infertility, Rh iso-immunization and ABO incompatibility, immunological causes of abortion, etc)	3	Lecture	CC	Knows-how	DIS,FC,L&PPT
CO1,CO2,CO7	Discuss and demonstrate the immunology-based diseases and investigations in Amrāze Niswān wa Qabālat	5	Practical2.4	PSY-GUD	Shows-how	CBL,D-BED,DIS,LRI
CO1,CO2,CO7	Construct, analyze, and interpret immunology-based investigations relevant to obstetrics and gynecology to guide clinical decision-making.	6	Experiential-Learning2.5	PSY-MEC	Does	CBL,D-BED,PBL,TUT

Practical Training Activity

Practical 2.1 : Follicular growth, ovarian hormones and vaginal environment

Total learning hours(4 hours)

1. Teacher Demonstrates Follicular Monitoring and Ovulation Assessment (1 Hour):
The teacher demonstrates follicular tracking via ultrasound at the bedside or using clinical videos/simulators. Normal follicular growth, dominant follicle identification, and signs of anovulation (e.g., persistent immature follicles) are explained. Correlation with endometrial thickness and hormonal regulation is emphasized.

2. Teacher Demonstrates Vaginal Environment Testing in Lab (1 Hour):
In the laboratory, the teacher demonstrates vaginal pH testing, amine (whiff) test, and wet mount microscopy using real or prepared specimens. Students observe differences in normal vaginal flora and pathological findings such as Candida, Trichomonas, or Clue cells.

3. Lab Report Interpretation by Students (1 Hour):
Students are provided with sample hormonal profiles (FSH, LH, estradiol, progesterone), ultrasound reports, and vaginal lab test results. In small groups, they interpret these reports to identify anovulation, PCOS patterns, or vaginal infections, and discuss diagnostic reasoning.

4. Case-Based Group Discussion (1 Hour):
Students are divided into small groups and given integrated cases (e.g., infertility with PCOS, abnormal discharge with suspected BV). They apply their knowledge of folliculogenesis, ovarian hormone synthesis, and vaginal physiology to analyze each case. The session concludes with group presentations and faculty feedback.

Practical 2.2 : Physiological process of menstruation.

Total learning hours(6 hours)

1. Visual Aids and Interactive Models (60 minutes)
The teacher will use diagrams and interactive models to illustrate key hormonal changes. Students will observe and analyze these models to understand the sequence of hormonal events.

2. Detailed Examination of Hormonal Changes (60 minutes)
Students will study and identify hormonal fluctuations in the menstrual cycle. Group discussions and case studies will be conducted to reinforce their understanding of menstrual regulation.

3. Clinical Cases of Menstrual Irregularities (45 minutes)
The teacher will present clinical cases related to menstrual abnormalities. Students will analyze patient histories and interpret diagnostic findings, including hormone levels and imaging results.

4. Diagnosis and Treatment Discussions (45 minutes)
Students will work in small groups to propose diagnoses and discuss treatment options for different menstrual disorders. Each student will contribute to the discussion, ensuring a comprehensive grasp of clinical implications.

5. Case Discussions in OPD and IPD (30 minutes)
The teacher will facilitate discussions on menstrual abnormalities such as abnormal uterine bleeding, amenorrhea, and oligomenorrhea in outpatient (OPD) and inpatient (IPD) settings. Students will observe and participate in these real-case discussions.

6. Case Documentation (30 minutes)
Students will record cases of menstrual abnormalities in practical files. The teacher will assign different types of menstrual abnormalities to individual students for documentation and analysis.

7. Journal Club – Case Reports and Review Articles (45 minutes)
The teacher will provide published case reports and review articles on menstrual abnormalities for students to analyze and discuss in a journal club setting.

8. Seminar Presentations on Menstrual Abnormalities (30 minutes)
Each student or small group will be assigned a specific menstrual abnormality for a seminar presentation. The teacher will guide students in preparing and delivering their presentations.

9.Practical Records and Log Book Maintenance (15 minutes)
Students must maintain records of all practical activities in their log books. Each practical session should be documented, including observations, case analyses, and discussions. The teacher will verify and provide feedback on students' records to ensure comprehensive learning.

Practical 2.3 : Pathological evaluation/Clinical evaluation of female genital organs

Total learning hours(5 hours)

1. Bedside Demonstration and Clinical Correlation (1.5 Hours):
Teacher demonstrates clinical examination findings in patients with conditions like cervical erosion, fibroids, ovarian masses, and vulval lesions. Students observe and correlate visible or palpable changes with possible underlying pathology.

2. Lab Report Interpretation Session (1 Hour):
Students review and interpret pap smear reports, biopsy histology, and tumor marker profiles (e.g., CA-125, HPV DNA, estrogen receptor status). They correlate reports with clinical diagnosis to distinguish between benign, pre-malignant, and malignant changes.

3. Student Group Presentations (1 Hour):
Groups present assigned topics such as endometrial hyperplasia, cervical dysplasia, or ovarian neoplasms, covering anatomy, pathology, diagnostic methods, and clinical implications. Focus is placed on visual aids (slides, diagrams, and specimen images).

4. Hands-on Workshop (1.5 Hours):
Workshop stations include:

- Microscopy of histological slides (normal vs pathological).
- Pelvic model demonstration of lesion localization.
- Case discussions with mock reports and specimens.
  The teacher supervises each station to ensure clinical-anatomical-pathological integration

Practical 2.4 : Immunology based Diseases

Total learning hours (5 hours)

1. Teacher Demonstration (1 hour):
The session begins with a teacher-led demonstration where key immunological disorders related to women's health are introduced. This includes autoimmune conditions such as Antiphospholipid Syndrome (APS), Systemic Lupus Erythematosus (SLE), and TORCH infections. The teacher demonstrates how common immunological investigations are performed—such as ELISA for APLA, ANA, Anti-dsDNA, and TORCH IgM/IgG. Real or virtual lab kits, visuals, and charts are used to explain the principle and procedure of each test.

2. Lab Report Interpretation (1 hour):
Students are divided into pairs and provided with anonymized patient lab reports showing various immunological findings (e.g., positive APLA, elevated ANA titers, TORCH profiles). Each pair is required to interpret the test results and correlate them with clinical presentations. They discuss the clinical implications of each finding and suggest possible diagnoses based on both Allopathic and Unani frameworks.

3. Case-Based Learning (1.5 hours):
The class is then divided into small groups (3–4 students per group), and each group is given a unique clinical case related to immunological issues in obstetrics and gynecology—such as recurrent pregnancy loss, infertility, or congenital infections. They analyze the case history, symptoms, and test results to identify the most likely diagnosis. The groups are encouraged to link the biomedical findings with Unani concepts like Sū'-e-Mizāj, Zof-e-Rahem, Iltihāb-e-Rahem, and suggest a management approach from both Unani and modern medical perspectives.

4. Group Discussion and Presentation (30 minutes):
Each group presents their case analysis to the class. This is followed by a discussion moderated by the teacher to consolidate learning, clarify doubts, and correct

misconceptions. The discussion also encourages students to articulate their understanding of how immunological factors influence women's health from both clinical and theoretical standpoints.

5. Reflection and Short Assessment (1 hour):
In the final hour, students complete a short quiz or reflective worksheet to assess their understanding of the topic. The worksheet includes MCQs, short answers, and a reflection on how immunological factors affect reproductive health. The teacher provides feedback on group participation, accuracy of lab interpretations, and clinical reasoning skills demonstrated during the activity.

Experiential learning Activity

Experiential-Learning 2.1 : Follicular Monitoring & Vaginat Assessment

Total activity hours(5 hours)

1. Case-Based Learning (1 Hour):
Students study cases of female infertility, irregular cycles, and vaginal discharge. Each case includes history, hormonal profile, and partial investigations. Students identify which investigations are required (e.g., follicular scan, pH test) and their relevance in diagnosis and treatment.

2. Bedside Demonstration – Ultrasound & Vaginal Assessment (1.5 Hours):
Student will demonstrate transvaginal or abdominal ultrasound for follicular monitoring, showing follicle size tracking and ovulation signs (e.g., corpus luteum, endometrial thickness). This is followed by a demonstration of vaginal pH testing, amine (whiff) test, and sample preparation for wet mount microscopy.

3. Problem-Based Learning Activity (1 Hour):
Students are presented with real-world clinical problems such as anovulatory cycles, PCOS, or bacterial vaginosis. They work in groups to select relevant investigations, interpret pH and microscopy results, and plan a diagnostic or therapeutic approach using their anatomical and physiological knowledge.

4. Wet Mount Microscopy and Interpretation (60 Minutes):
Students examine prepared slides under the microscope (wet mount, saline mount, KOH) to identify clue cells, yeast, Trichomonas, or normal flora. Emphasis is placed on correlating findings with pH results and vaginal complaints.

5. Recap and Clinical Correlation Discussion (30 Minutes):
A group tutorial recaps the anatomy and physiology of ovulation, vaginal flora, and hormonal influence. Students reflect on how ultrasound and vaginal tests guide diagnosis in infertility and infection. The teacher reinforces clinical application through guided Q&A.

Experiential-Learning 2.2 : Clinical Approach to Menstrual Disorders

Total activity hours(4 hours)

1. Case Diagnosis and Case-Based Learning (1 Hour):
Students are presented with different clinical cases such as primary amenorrhea, dysfunctional uterine bleeding, and polymenorrhea. Each group analyzes history and symptoms, identifies the abnormality, and relates it to underlying hormonal and physiological mechanisms.

2. Lab Report Interpretation (1 Hour):
Students review hormone profiles (FSH, LH, estrogen, progesterone, prolactin, thyroid), ultrasound findings, and endometrial biopsy reports. They interpret these reports to determine causes of cycle disturbances like anovulation, thyroid disorders, or PCOS.

3. Group Presentation (1 Hour):
Each group presents a case including diagnosis, pathophysiology, lab findings, and treatment approach. Presentations emphasize the link between hypothalamic-pituitary-ovarian axis dysfunction and clinical features of menstrual disorders.

4. Interactive Tutorial (1 Hour):
The session concludes with a tutorial where the teacher reviews the normal physiology of the menstrual cycle, discusses classification of menstrual disorders, and guides a Q&A discussion on diagnosis and management, using clinical examples and visual aids.

Experiential-Learning 2.3 : Physiological process of menstruation

Total activity hours(4 hours)

1. Demonstration Bedside/Demontration Models (45 min): Students actively engage in performing, demonstrating, and analyzing processes related to menstruation and its pathological variations.

Student will demonstrate the menstrual cycle using 3D models, charts, and animations.
Focus on hormonal regulation (HPO axis), endometrial changes, and the ovulatory process.

Students will record their explanations in their logbooks.

2. Quiz-based interactive discussion on variations in the menstrual cycle. (15 min)
Each student will write a short reflection on one new concept learned.

3. Pathological Variations & Simulation (60 min)
Teahcer presents three clinical cases of menstrual disorders (e.g., PCOS, endometriosis, AUB) using simulated patients or case studies. (30 min):
Students analyze the cases and note key findings in their logbooks. Each student will individually identify and classify pathological variations using histopathology slides or virtual simulators. (30 min)
Observations and conclusions will be recorded in logbooks.

4. Case Based Assesementt: Clinical Case Analysis & Small Group Discussion (60 min)
Students will individually present at least 3 clinical case related to menstrual abnormalities, focusing on pathophysiology and diagnosis. (20 min)
Each student will document their case analysis in their logbooks.

Teacher-led small group discussions where students compare different cases and discuss variations. (20 min)
Each student will summarize insights from the discussion in their logbooks.

Hands-on session using ultrasound or laparoscopy simulation to visualize menstrual abnormalities. (20 min)
Students will individually identify and describe findings in logbooks.

5. Practical Skill Assessment & Reflection (60 min)
Teacher provides a case-based problem-solving task (e.g., diagnosing a menstrual disorder based on symptoms and lab findings). (30 min)
Each student will individually analyze and document at least 3 cases in their logbooks. Students will demonstrate and explain a chosen pathological condition using models or charts. (15 min)

Reflection session: Each student will write a summary of their key learnings and practical challenges faced. (15 min)

Experiential-Learning 2.4 : Pathological changes in females genital organs

Total activity hours(7 hours)

1. Clinical Case Examination (2 Hours)
Each student will examine at least four patients with suspected gynecological pathology (e.g., cervical cancer, endometrial hyperplasia, ovarian tumors).
Bedside teaching, supervised case examination.
Students will document findings (history, examination, provisional diagnosis) in the logbook.

2. Histopathology Slide Analysis (1 Hour)
Each student will analyze at least three histopathological slides of common gynecological conditions in real case or by virtually.
Microscopic examination under faculty supervision, followed by case discussion.
Key observations recorded in the logbook with differential diagnosis.

3. Ultrasound and Imaging Interpretation (1 Hour)
Students will interpret at least three ultrasound or MRI images related to gynecological pathology (e.g., ovarian cysts, fibroids, malignancies).
Hands-on ultrasound exposure, imaging review with radiology experts.
Findings, correlation with clinical diagnosis noted in the logbook by the students.

4. Case-Based Discussion (1 Hour)
Each student will present and discuss at least one complex pathological case with faculty and peers.

Case presentation with interactive discussion on diagnosis and management.
Summary of key learning points recorded in the logbook.

5. Diagnostic Procedure Hands-on Training (2 Hours)
Students will perform or assist in at least two diagnostic procedures such as Pap smear, endometrial biopsy, or colposcopy under supervision.
Simulation-based learning, hands-on supervised procedures.
Procedure steps, observations, and reflections recorded in the logbook.

Experiential-Learning 2.5 : Simulation-Based Decision making / Clinical Case Presentation

Total activity hours (6 hours)

1. Case-Based Learning (1.5 Hours):
Students are presented with clinical cases such as recurrent pregnancy loss, Rh isoimmunization, autoimmune infertility, and TORCH infections. Each group identifies relevant immunological tests needed for diagnosis and justifies their use based on clinical context.

2. Bedside/Video Demonstration (1 Hour):
The teacher demonstrates or uses videos to explain sample collection, test procedures, and clinical applications for key tests like Indirect Coombs test, ANA, anti-phospholipid antibodies, and Rubella IgG/IgM serology in antenatal patients or infertility workup.

3. Problem-Based Learning (1.5 Hours):
Students solve structured clinical problems such as differentiating between autoimmune vs infectious causes of miscarriage, or interpreting positive ANA in endometriosis. They develop diagnostic pathways using immunological tools and suggest appropriate management based on test outcomes.

4. Lab Report Interpretation (1 Hour):
Groups are provided real or mock lab reports, such as positive anti-sperm antibody, elevated anti-TPO, or positive CMV IgM. They interpret these findings in clinical context and correlate them with case management steps, including need for treatment, vaccination, or referral.

5. Tutorial and Integration Discussion (1 Hour):
The teacher conducts a final tutorial summarizing key immunological markers, their mechanisms, diagnostic value, and limitations. Students reflect on how immunology integrates with reproductive and pregnancy care, reinforcing its role in personalized treatment planning.

Modular Assessment

Assessment method	**Hour**
Instructions: Conduct a structured modular assessment. Assessment will be for 50 marks . Keep a structured marking pattern. Use different method in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per table 6C	4

1. Case presentation: (25 marks) Each student will be given a case history or problem situation to diagnose the abnormal function of reproductive organs and menstrual abnormalities. 2. Project-Based Assessment (Total: 25 Marks) • Topic Selection and Aim (2 marks): Marks will be awarded for the relevance of the topic to the module and clarity of the project objectives. • Literature Review (5 marks): Assessed based on depth of understanding, integration of relevant concepts, and use of updated references. • Methodology or Approach (5 marks): Evaluation of the logical framework used, clinical or scientific relevance, and appropriateness of the approach. • Analysis and Interpretation (8 marks): Marks for critical analysis, integration of applied physiology, pathophysiology, and immunology, and application to clinical context. • Presentation (5 marks): Includes organization, clarity of content, quality of visuals (charts, graphs, etc.), and timely submission. OR Any practical in converted form can be taken for assessment (25 marks) and Any experiential such as portfolios/reflection/presentations, can be taken as an assessment. (25 marks) Total marks 50	

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 3 : طبعی نظام تولید (علم جنین اور اس کا رتقاء) Physiology of reproduction (Embryology)						
Module Learning Objectives **(At the end of the module, the students should be able to)** 1. Describe the physiology of reproduction. 2. Identify and associate the various abnormalities affecting the reproduction. 3. Apply the physiology of reproduction in understanding the various reproductive technologies 4. Apply the basics of reproduction in assessing the cases.						
Unit 1 تولیض اور بارآوری Gametogenesis and fertilization 3.1.1 Oogenesis 3.1.2 Spermatogenesis 3.1.3 Fertilization **References:** 9,10,11						
3A	3B	3C	3D	3E	3F	3G
CO1,CO5,CO7	Describe and understand the physiology of oogenesis, spermatogenesis and fertilization	2	Lecture	CC	Knows-how	FC,L&PPT ,L_VC
CO1,CO5,CO7	Analyze procedures related to assisted reproductive technologies (ART) to demonstrate practical understanding of gametogenesis and fertilization, while analyzing their physiological basis and clinical relevance in a controlled setting.	5	Practical3.1	PSY-GUD	Shows-how	CBL,D-M,SIM

CO1,CO5,CO7	Explore ART Techniques and assess case studies that illustrate issues in gametogenesis or fertilization.	4	Experiential-Learning3.1	CAN	Does	CD,CBL,PBL
Unit 2 تنصیبِ جنین اور ابتدائی مرحلہ ارتقاء Implantation & early embryonic development 3.2.1 Definitions, phases and clinical implications of Implantation 3.2.2 Embryonic development. **References:** 2,4,6,7						
3A	**3B**	**3C**	**3D**	**3E**	**3F**	**3G**
CO1,CO5,CO7	Describe and discuss the physiology of implantation and early embryonic development	2	Lecture	CAN	Knows-how	L&GD,L&PPT ,L_VC
CO1,CO5,CO7	Explore and understand the classical Unani perspectives on implantation and early embryonic development as described in Unani texts	2	Practical3.2	CAN	Shows-how	DIS,LS,PER,SY,TUT
CO1,CO5,CO7	Identify and describe the stages of implantation and early embryonic development using labeled diagrams, histological slides, or 3D models, and correlate these stages with clinical conditions such as ectopic pregnancy or implantation failure.	2	Practical3.3	PSY-GUD	Shows-how	CBL,D-M,TUT
CO1,CO5,CO7	Demonstrate the process of implantation and early embryonic development using models or simulations.	3	Experiential-Learning3.2	PSY-MEC	Does	D-M,DIS,PL,SIM
CO1,CO5,CO7	Analyze the hormonal and cellular interactions during implantation and early embryonic development through interpretation of scientific literature and relevant case studies.	3	Experiential-Learning3.3	CAN	Knows-how	CD,CBL,DIS,LS,PER
Unit 3 زنانہ اعضاءِ تولید کے خلقی نقائص Anomalies in genital tract development 3.3.1 Development of genital tract 3.3.2 Genital tract anomalies & its applied aspect **References:** 2,5,8,21,22						
3A	**3B**	**3C**	**3D**	**3E**	**3F**	**3G**

CO1,CO5,CO7	Describe the development of the genital tract and discuss the types and causes of its congenital anomalies	2	Lecture	CAN	Knows-how	DIS,L&PPT ,L_VC
CO1,CO5,CO7	Perform diagnostic procedures and interpret imaging findings to identify genital tract anomalies.	4	Practical3.4	PSY-GUD	Shows-how	CBL,D,DIS
CO1,CO5,CO7	Analyze and discuss genital tract anomaly cases to evaluate implications and formulate suitable diagnostic and management plans.	4	Experiential-Learning3.4	CAN	Knows-how	CBL,PL

Unit 4 تکوینِ مشیمہ، ارتقاءِ جنین اور دورانِ ولادت واقع ہونے والے تغیرات Placenta formation & fetal development and growth and changes at birth

3.4.1 Placenta development

3.4.2 Abnormalities of placenta

3.4.3 Fetal development and changes after birth

References: 2,7,9,11,23

3A	3B	3C	3D	3E	3F	3G
CO1,CO5,CO7	Describe the stages of placental and fetal development, discuss the functions of placental hormones, and explain the physiological transitions in major fetal systems—particularly cardiovascular, respiratory, and gastrointestinal—as the fetus adapts to extrauterine life.	2	Lecture	CC	Knows-how	DIS,L&PPT
CO1,CO5,CO7	Identify the placental abnormalities, fetal malformations, abnormal fetal growth, and deviation from the normal changes after birth	4	Practical3.5	PSY-GUD	Shows-how	CBL,D,LRI,PER
CO1,CO5,CO7	Diagnose the placental abnormalities and fetal malformations on examination and through imaging technologies,	2	Experiential-Learning3.5	PSY-MEC	Does	CBL,D-BED
CO1,CO5,CO7	Identify and analyze abnormal fetal growth through clinical examination, imaging, and laboratory reports, and assess deviations from normal physiological changes after birth.	3	Experiential-Learning3.6	PSY-MEC	Does	D-BED,DIS,RLE
CO1,CO5,CO7	Demonstrate case studies on placental insufficiency and its impact on fetal development	2	Experiential-Learning3.7	PSY-MEC	Does	CBL,DIS,LRI,PER,SIM

Unit 5 رضاعت کا طبعی بیان Physiology of Lactation

3.5.1 Physiology of lactation.

3.5.2 Causes and factors affecting milk production

3.5.3 Issues related to lactation

References: 4,5,6,15,23

3A	3B	3C	3D	3E	3F	3G
CO1,CO5,CO7	Discuss the anatomy of mammary glands, physiology of lactation, &milk composition	2	Lecture	CE	Knows-how	L&PPT ,L_VC
CO1,CO5,CO7	Identify and explain the causes and factors affecting milk productionand analyse their impact on lactation.	3	Practical3.6	PSY-GUD	Shows-how	DIS,PL,PER,SY
CO1,CO5,CO7	Demonstrate breastfeeding support techniques and analyze clinical lactation issues through hands-on practice, field observations, and participation in awareness programs.	5	Experiential-Learning3.8	AFT-SET	Does	CD,CBL,FV,PER

Practical Training Activity

Practical 3.1 : ART Procedures & Techniques

Total learning hours(5 hours)

1. Introduction & Theoretical Overview (30 minutes)

The session begins with a brief lecture explaining the processes of gametogenesis (spermatogenesis and oogenesis), hormonal control, and the physiology of fertilization. An overview of Assisted Reproductive Technologies (ART) such as IVF, IUI, and ICSI is presented using animations and charts to help students visualize and understand key concepts.

2. Demonstration Using Models (1 hour)

Students interact with 3D anatomical models of the male and female reproductive systems. The instructor demonstrates relevant anatomical landmarks and physiological events involved in gamete formation and fertilization. Learners connect these with specific ART steps to enhance practical understanding.

3. Video-Based ART Procedure Demonstration (1.5 hours)

High-resolution video clips are shown to illustrate each step of ART, including ovarian stimulation, egg retrieval, sperm preparation, fertilization techniques (IVF/ICSI), and embryo transfer. Students complete observation worksheets while key points are explained during and after the videos through instructor-led discussion.

4. Case-Based Clinical Application (1 hour)

Students are divided into small groups and given clinical cases involving infertility. They analyze the physiological basis of the condition and suggest the most appropriate ART procedure. Each group presents its case discussion and rationale, encouraging critical thinking and peer learning.

5. Reflection, Discussion & Assessment (1 hour)

The session concludes with an open discussion on the ethical and clinical aspects of ART. A short quiz (MCQs) and reflective writing activity are conducted to assess knowledge and personal insights. The instructor summarizes key takeaways and answers any remaining questions.

Practical 3.2 : Unani perspectives on implantation and early embryonic development

Total learning hours(2 hours)

1. Introduction and Instructions (10 minutes)
Teacher introduces the session by explaining the importance of exploring early embryonic development through classical Unani literature. Students are divided into small groups, and each group is assigned a specific stage or classical author to explore.

2. Literature Review and Library Session (40 minutes)
Students proceed to the library or use provided translated materials to review relevant sections of classical texts. Each group focuses on extracting descriptions, terminologies, and interpretations related to implantation and early embryonic stages. They prepare notes and organize their findings for further discussion.

3. Group Discussion and Comparison (30 minutes)
Students engage in focused group discussions to interpret classical Unani explanations and correlate them with modern scientific knowledge. The teacher facilitates the conversation by highlighting the integration of traditional perspectives with current embryological understanding, encouraging critical thinking and reflection.

4. Presentations (30 minutes)
Each group presents a summary of their findings, including key terms, conceptual explanations, and references from the classical texts. Presentations are kept concise and interactive, followed by teacher feedback and clarification.

5. Conclusion and Reflection (10 minutes)
The session concludes with a reflective discussion led by the teacher. Students are encouraged to share insights gained from the classical texts and express how understanding these perspectives contributes to a more integrative and holistic view of reproductive health in Unani medicine.

Practical 3.3 : Implantation & Embryogenesis

Total learning hours(2 hours)

1.Demonstration Using 3D Models and Visual Aids (30 minutes)
Teacher demonstrates the stages of implantation and early embryonic development using 3D anatomical models, wall charts, and animations. The demonstration includes detailed explanation of fertilization, cleavage, morula and blastocyst formation, zona hatching, and blastocyst attachment to the endometrium. Students are encouraged to interact by identifying stages and labeling anatomical structures. Clinical relevance is emphasized throughout, especially regarding the site and mechanism of implantation.

2. Histological Slide Observation (20 minutes)
Teacher guides students through histological slides or digital histology images, explaining changes in the endometrium during implantation. Key features such as syncytiotrophoblast, cytotrophoblast, lacunae formation, and decidual response are identified and discussed. Students examine each slide carefully and relate the observed structures to the stages of early development. Short questions and comparisons between normal and abnormal histological findings are included to reinforce understanding.

3. Case-Based Learning Activity (30 minutes)
Teacher presents multiple clinical case scenarios related to early pregnancy complications, such as ectopic pregnancy, implantation failure, or abnormal uterine environment. Students are divided into small groups, with each group assigned a different case. They analyze clinical symptoms, imaging findings, and lab reports, then correlate the information with normal embryological processes. Each group discusses the pathophysiology, identifies the likely diagnosis, and proposes clinical reasoning behind it.

4. Group Discussion and Reflection (30 minutes)
Teacher facilitates a structured discussion where each group presents their case analysis and reflections. The class engages in comparing normal versus abnormal implantation and identifying critical learning points. Discussion is enriched by drawing parallels with Unani medicine concepts, such as عجز حمل and سقوط حمل, offering an integrative view of reproductive pathology. Students reflect on how embryological knowledge applies to both modern and traditional clinical contexts.

5. Quiz and Recap (10 minutes)
Teacher conducts an extended quiz featuring multiple-choice, short-answer, and image-based questions covering developmental stages, histological features, and clinical correlations. After students complete the quiz, the teacher reviews each answer in detail, encouraging clarification and discussion. The session concludes with a recap of key concepts and a Q&A session to address any remaining doubts.

Practical 3.4 : Genital tract anomalies interpretation.

Total learning hours (4 hours)

1. Introduction & Overview (30 mins)

Teacher demonstrates an overview of common genital tract anomalies such as septate uterus, bicornuate uterus, and vaginal agenesis using presentations and clinical diagrams. The teacher also explains the role of imaging techniques like ultrasound, HSG, and MRI in diagnosis.
Students listen to the explanation, ask questions, and participate in a short discussion to build foundational knowledge.

2. Imaging Interpretation Session (1 hour)

The teacher presents real or sample imaging (ultrasound, HSG, MRI) showing both normal and abnormal pelvic anatomy, highlighting key diagnostic features.
Students work in small groups to examine provided images, identify anomalies, and complete a worksheet interpreting each finding and suggesting a possible diagnosis.

3. Hands-on Simulation (1 hour)

The teacher demonstrates basic diagnostic techniques using mannequins or pelvic models, such as transvaginal ultrasound probe placement or simulated hysteroscopy setup. Safety, positioning, and patient considerations are discussed.
Students practice handling the models, identifying anatomical landmarks, and simulating basic diagnostic procedures under supervision.

4. Clinical Case Discussion (1 hour)

Teacher presents clinical case scenarios with symptoms, imaging, and background history. Each case is reviewed in a step-by-step diagnostic approach.
Students analyze cases in groups, correlate imaging with clinical findings, and present a summary including diagnosis and recommended steps.

5. Review and Assessment (30 mins)

Teacher summarizes all key points and common pitfalls in diagnosis. A brief quiz or image-based test is conducted to assess understanding.
Students complete the quiz, submit their worksheets, and reflect on what they have learned during the session.

Practical 3.5 : Placental and Fetal Abnormalities

Total learning hours(4 hours)

1. Introduction and Concept Briefing (30 minutes)

The teacher introduces the topic using models and multimedia slides to explain normal placental structure, fetal development, growth patterns, and changes after birth. The teacher also highlights key abnormalities such as placenta previa, intrauterine growth restriction (IUGR), congenital malformations, and postnatal deviations. Students listen to the presentation, take notes, and ask questions to clarify their understanding.

2. Observation of Specimens, Slides, and Models (1 hour)

The teacher demonstrates anatomical specimens, histological slides, or 3D models showing both normal and abnormal placental structures, fetal anomalies like anencephaly or limb deformities, and indicators of abnormal fetal growth. Students observe these materials closely, sketch the structures, and label key differences between normal and abnormal findings in their worksheets.

3. Case-Based Group Analysis (1 hour 30 minutes)

The teacher provides students with a set of clinical case scenarios involving placental or fetal abnormalities. Each case includes images, birth records, and growth charts. Students work in small groups to analyze each case, identify the abnormality, and discuss possible causes and consequences. They record their findings and prepare a brief presentation of their case analysis.

4. Student Presentations and Reflection (1 hour)

Students present their group findings to the class, explaining the type of abnormality, its clinical implications, and how it differs from normal development. The teacher facilitates discussion, corrects errors, and provides additional insights. Students reflect on what they have learned through peer interaction and clinical correlation, and submit their worksheets for evaluation.

Practical 3.6 : Clinical Assessment of Lactation Factors

Total learning hours(3 hours)

1. Interactive Presentation and Concept Introduction (45 minutes)

The session begins with a structured multimedia presentation by the instructor covering the physiological basis of lactation, stages of milk production (lactogenesis I & II, galactopoiesis, and involution), and hormonal regulation (prolactin, oxytocin, estrogen, progesterone). The presentation also highlights key causes and factors affecting milk production, such as maternal nutrition, stress, parity, endocrine disorders, neonatal suckling, breast anatomy, and use of medications. Diagrams, charts, and short animation clips are used to enhance understanding and engagement.

2. Group Discussion and Peer Learning (1 hour)

After the presentation, students are divided into small peer groups and assigned specific factors (e.g., hormonal imbalance, poor infant latch, maternal malnutrition, stress, or mastitis). Each group discusses how their assigned factor affects milk production and lactation physiology. They refer to real or hypothetical case examples to connect theory with practical impact. Faculty members circulate between groups to guide discussions and answer queries, encouraging clinical reasoning and collaborative learning.

3. Group Presentations and Clinical Correlation (45 minutes)

Each group presents a summary of their discussion, explaining the cause they analyzed, its physiological impact, and how it can be managed or corrected clinically. The instructor facilitates a short Q&A session after each group presentation, encouraging students to compare and contrast different factors. This is followed by a brief wrap-up where the key takeaways from each group are consolidated into a holistic understanding of lactation management.

4. Assessment and Reflection (30 minutes)

To conclude, students complete a short quiz or reflective prompt summarizing what they learned about factors influencing milk production. They are also encouraged to write a brief paragraph on how this knowledge applies to maternal and child healthcare. The session ends with the instructor clarifying any remaining doubts and reinforcing important physiological concepts.

Experiential learning Activity

Experiential-Learning 3.1 : Comprehensive ART Clinical Training

Total activity hours(4 hours)

1. Clinical Observation of ART Procedures (60 minutes)
Students will visit a fertility clinic (in-person or virtually) to observe ART procedures in a real-world setting.
Key procedures include:
Gamete collection (oocyte retrieval and sperm preparation).
Gamete handling and assessment under a microscope.
Fertilization techniques such as conventional IVF and ICSI.
Embryo transfer procedures and associated decision-making.
Faculty and clinic professionals will provide insights into procedural workflows, instrumentation, and clinical considerations.

2. Problem based learning: Application of Gametogenesis and Fertilization Principles (60 minutes)
Students will analyze ART procedures in relation to gametogenesis and fertilization concepts.
Emphasis on:
Hormonal regulation of oogenesis and spermatogenesis.
Impact of gamete qualities on fertilization success.
The role of culture condition in embryonic development.
Correlation of ART interventions with reproductive physiology.

3. Case Study Analysis: Infertility and ART Interventions (60 minutes)
Students will evaluate clinical cases involving infertility due to gametogenesis or fertilization disorders.
Sample cases may include:
Ovarian dysfunction (e.g., anovulation, poor ovarian reserve).
Male factor infertility (e.g., low sperm count, poor motility, teratozoospermia).
Fertilization failure (e.g., unexplained infertility, failed ICSI cycles).
Students will review patient history, diagnostic results, and ART treatment strategies.

4. Group Discussion and Clinical Decision-Making (60 minutes)
Small-group discussions on diagnostic approaches, treatment planning, and ethical considerations in ART.
Students will develop evidence-based recommendations for patient management.
Integration of clinical observations with theoretical knowledge to reinforce ART's role in reproductive medicine.

Faculty-led wrap-up session to address key learning points and provide feedback. Assessment & Reflection:
Completion of clinical observation logbook documenting key ART techniques.
Case study presentation with diagnostic rationale and treatment recommendations.
Reflective discussion on the application of ART in infertility management.

Experiential-Learning 3.2 : Clinical Case Analysis in ART

Total activity hours(3 hours)

1. Group-Based Model Exploration (1 Hour)

Students will begin the session by forming small groups and engaging with 3D anatomical and embryological models. Each group will independently reconstruct the sequential stages from fertilization to implantation and early embryonic development. Using model components, students will identify and label key structures including the blastocyst, trophoblast, embryonic disc, and endometrial layers. As they manipulate the models, students will also explain the transformation of the blastocyst and its interaction with the endometrial lining, encouraging peer-to-peer teaching and reinforcement of anatomical orientation.

2. Simulation-Based Scenario Activity (1 Hour 15 Minutes)

In the second phase, students will rotate through interactive simulation stations. Using either digital embryology simulations or layered tactile kits, they will perform step-by-step modeling of implantation and early development. This activity includes exploring normal and abnormal scenarios such as ectopic pregnancy or failed trophoblast invasion. Each student group will follow guided clinical prompts to analyze each case, identify the stage at which implantation failed or deviated, and correlate the anatomical outcome with possible clinical symptoms. This hands-on activity promotes applied understanding in a self-directed, collaborative environment.

3. Student Reflection and Peer Teaching (45 Minutes)

To consolidate the learning experience, students will reflect on the key stages of embryonic development they explored. Each group will present their understanding to the rest of the class through a brief visual representation (e.g., drawings, model displays) or oral summary. They will highlight important anatomical transitions, share challenges they faced during the simulation, and explain the clinical relevance of understanding early implantation—such as its impact on fertility and early pregnancy outcomes. This peer-led session fosters critical thinking, communication, and integration of knowledge into clinical reasoning.

Experiential-Learning 3.3 : Hormonal and cellular interactions

Total activity hours(3 hours)

1. Literature Review and Summary/Library session(90 minutes):

In the first part of the session, students will individually select or be assigned a recent peer-reviewed research article. The selected articles will focus on either hormonal regulation (such as the roles of hCG, progesterone, and estrogen) or cellular mechanisms (such as trophoblast invasion and endometrial receptivity) involved in implantation

and early embryonic development. Students are expected to read the article critically and prepare a written summary of 400 to 500 words. The summary should highlight the key hormonal or cellular mechanisms discussed, describe the experimental methods used, and present the major findings along with their clinical relevance. This task aims to develop students' skills in reviewing scientific literature and extracting clinically relevant information.

2. Clinical Case Interpretation (60 minutes):

In the second part of the activity, each student will receive a short clinical case scenario related to implantation abnormalities, such as luteal phase defect, implantation failure, or abnormal hCG levels. Based on their understanding of the literature reviewed in Part 1, students will write a concise analytical report of 300 to 400 words. The report should identify the disrupted hormonal or cellular process involved in the case, explain its diagnostic implications, and propose possible interventions or management strategies supported by current research evidence. This part of the exercise reinforces clinical reasoning and encourages students to bridge the gap between theoretical knowledge and practical application.

3. Post activity discussion. (30 minutes)

Experiential-Learning 3.4 : Case- based Analysis of Genital Tract Anomalies

Total activity hours(4 hours)

1. Introduction and Case Orientation (30 minutes)

Students review background material on genital tract anomalies and are provided with 2–3 anonymized clinical case scenarios, including brief patient histories, symptoms, and imaging findings. They read through the cases individually and highlight key issues.

2. Group Discussion and Analysis (1 hour)

Students form small groups to discuss each case in depth. They identify the physiological, psychological, and reproductive implications of the anomalies presented. Each group works together to analyze the clinical findings and explore differential diagnoses.

3. Diagnostic and Management Planning (1.5 hours)

Students collaborate to formulate appropriate diagnostic plans based on available imaging and clinical data. They discuss possible management strategies, including medical or surgical options, and consider patient-centered care approaches. Each group prepares a summary of their diagnostic reasoning and proposed interventions.

4. Presentation and Peer Feedback (1 hour)

Each group presents their case analysis, diagnostic interpretation, and management plan to the class. Peer groups offer feedback and discuss alternative perspectives. Students reflect on how their understanding evolved through collaborative learning and real-world case application.

Experiential-Learning 3.5 : Diagnostic Approach to Placental and Fetal Abnormalities

Total activity hours(2 hours)

1. Case-Based Learning and Real-Life Experience (30 minutes)
Students participate in case-based learning and real-life experience sessions focused on diagnosing placental abnormalities and fetal malformations.
Emphasis on clinical decision-making through structured case discussions.

2. Clinical Scenarios and Imaging Interpretation (60 minutes)
Review of diagnostic criteria using clinical scenarios and imaging studies such as ultrasound and MRI.
Practice in interpreting real or simulated cases to enhance diagnostic skills.
Students document key observations and interpretations in their logbook for future reference.

3. Case Diagnosis and Evidence-Based Analysis (20 minutes)
Students analyze findings, formulate evidence-based diagnoses, and discuss clinical implications.
Presentation of conclusions with peer discussions to reinforce learning outcomes.
Logbook entries include final case diagnoses, supporting evidence, and clinical reflections.

4. Post-Activity Feedback and Wrap-Up (10 minutes)
Students and facilitators engage in a feedback session to discuss key takeaways, challenges, and areas for improvement.
Summary of learning outcomes and clarification of any remaining doubts.
Final logbook entry includes a reflective summary of the session, highlighting key learnings and clinical insights.

Experiential-Learning 3.6 : Fetal Growth Diagnosis & Analysis

Total activity hours(3 hours)

1. Clinical Examination and Case Selection (30 minutes)
Students will select two or three cases related to abnormal fetal growth.
Perform a detailed clinical examination, documenting key findings.
Maintain a logbook or practical record, noting initial observations and differential diagnoses.

2. Imaging and Laboratory Report Analysis (60 minutes)
Review and interpret imaging studies such as ultrasound, Doppler, and MRI for fetal growth assessment.
Analyze laboratory reports to correlate biochemical markers with fetal development abnormalities.
Record imaging interpretations and lab findings in the logbook with relevant clinical correlations.

3. Comparison with Normal Physiological Changes (30 minutes)
Compare findings with normal fetal growth parameters and postnatal physiological adaptations.
Identify and document deviations in the logbook with justifications based on clinical evidence.

4. Case Discussion and Evidence-Based Diagnosis (30 minutes)
Discuss case findings, integrating clinical, imaging, and laboratory data.
Formulate evidence-based diagnoses and possible management strategies.
Logbook entries should include final case conclusions with supporting rationale.

5. Post-Activity Reflection and Logbook Review (30 minutes)
Students will reflect on key learnings and clinical challenges.
Facilitators will review logbook entries and provide feedback on documentation and diagnostic accuracy.
Students will update records based on feedback and finalize case summaries.

Experiential-Learning 3.7 : Placental Insufficiency impact on fetus

Total activity hours(2 hours)

1. Concept Introduction through Presentation (30 minutes)

The session begins with a focused presentation introducing placental structure and function, followed by the concept of placental insufficiency. The instructor explains its causes (e.g., preeclampsia, maternal hypertension, smoking), physiological consequences (reduced oxygen/nutrient transfer), and clinical outcomes such as intrauterine growth restriction (IUGR), low birth weight, and preterm birth. Real ultrasound images and placental Doppler case visuals are shown to contextualize the theory.

2. Simulation-Based Case Demonstration (45 minutes)

Students engage with two interactive clinical case simulations. Each simulation presents a scenario of a pregnant woman with symptoms suggesting placental insufficiency. Students analyze maternal history, fetal monitoring reports, and placental ultrasound findings. They are guided to identify signs of fetal compromise and suggest clinical decisions such as timing of delivery or monitoring plans. Digital simulation tools or structured paper-based cases may be used for interactivity.

3. Group Discussion and Reflection (45 minutes)

After the simulations, students break into small groups to discuss each case. They reflect on fetal development impacts such as IUGR, hypoxia, and neurological risk. Each group summarizes key learning points and presents one takeaway or clinical insight. The session ends with a brief faculty-led discussion comparing different case responses and reinforcing the importance of placental health in prenatal care.

Experiential-Learning 3.8 : Lactation Support and Awareness Program

Total activity hours(5 hours)

1. Observation of Breastfeeding Support Sessions (60 minutes)
Students will observe live or recorded breastfeeding support sessions to understand common lactation challenges.
Focus on practical techniques for assisting mothers with positioning, latch correction, and overcoming difficulties.
Logbook entries will include key observations and techniques learned.

2. Field Visits and Case Analysis (90 minutes)
Students will visit healthcare centers or maternity wards to examine real cases of lactation issues such as mastitis and low milk supply.
Interaction with healthcare providers to understand management strategies.
Logbook entries will document case details, interventions, and clinical outcomes.

3. Participation in Awareness Programs (60 minutes)
Engagement in breastfeeding awareness campaigns to educate mothers and families on the importance of lactation support.
Discussion on cultural and social influences on breastfeeding practices.
Students will record reflections on public health approaches to breastfeeding promotion in their logbook.

4. Group Discussion and Case Presentation (60 minutes)
Students will present case findings and discuss challenges observed during field visits.
Critical analysis of different management approaches to lactation issues.
Logbook entries will include key discussion points and evidence-based solutions.

5. Post-Activity Wrap-Up and Feedback (30 minutes)
Facilitators will provide feedback on case interpretations and practical learning experiences.
Students will reflect on their learning, challenges faced, and improvements for future practice.
Final logbook entries will summarize the session, including key takeaways and potential areas for further study.

Modular Assessment

Assessment method	**Hour**

Instructions: Conduct a structured modular assessment. Assessment will be for 50 marks. Keep a structured marking pattern. Use different method in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per table 6C 1. Case-based evaluation/Case presentation: (25 marks) Each student will be given a case history or problem situation to diagnose the abnormal function of reproductive organs and menstrual abnormalities. Detailed History (10 marks) Examination accuracy (5 marks) Viva-voce from case (10 marks) 2. Power Point Presentation: (25 marks) Students will be assigned topics related to physiology of reproduction for presentation Content of the lecture (10 marks) Problem solving (5 marks) Use of audio-visual aids (5 marks) Clarity (5 marks) OR Any practical in converted form can be taken for assessment (25 marks) and Any experiential such as portfolios/reflection/presentations, can be taken as an assessment. (25 marks) Total marks 50	4

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 4 : بلوغت، حمل، وضع حمل، نفاس اور انقطاع حیض کے دوران زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحی تغیرات Physiological and anatomical changes in female genital tract during puberty, Pregnancy, Labour,Puerperium and menopause						
Module Learning Objectives **(At the end of the module, the students should be able to)** 1. Describe about the physiological and anatomical changes in female genital tract during various phases of life 2. Identify the various abnormalities in female genital tract during various phases of life 3. Apply the physiological and anatomical changes in female genital tract in assessing the abnormalities						
Unit 1 دوران بلوغت و مراھقہ زنانہ اعضاءِ تناسلیہ میں لاحق ہونے والے منافع الاعضائی و تشریحی تغیرات Physiological and anatomical changes in female genital tract during puberty and adolescence 4.1.1 Changes in female genital tract during Puberty and adolescence **References:** 4,5,7,22						
3A	3B	3C	3D	3E	3F	3G
CO1,CO5	Describe Physiological and anatomical changes in female genital tract during puberty and adolescence	2	Lecture	CE	Knows-how	L&GD,L&PPT
CO1,CO5	Analyze and differentiate the normal and abnormal physiological and anatomical changes in the female genital tract during puberty and adolescence, including cases of precocious and delayed puberty.	4	Practical4.1	PSY-GUD	Shows-how	BS,CBL,D,PER
CO1,CO5,CO7	Assess the normal and abnormal physiological and anatomical changes in the female genital tract during puberty	6	Experiential-Learning4.1	PSY-MEC	Does	CBL,D-BED,SIM,TBL

Unit 2 دوران حمل اور وضع حمل زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحی تغیرات **Physiological and anatomical changes in female genital tract during Pregnancy and Partum**

4.2.1 Changes in female genital tract during Pregnancy

References: 1,2,6

3A	3B	3C	3D	3E	3F	3G
CO1,CO5,CO7	Describe the Physiological and anatomical changes in the female genital tract during Pregnancy	3	Lecture	CC	Knows-how	L,L&PPT
CO1,CO5,CO7	Demonstrate the normal and abnormal physiological and anatomical changes in the female genital tract during pregnancy.	4	Practical4.2	PSY-GUD	Shows-how	D,D-M,SIM,TUT
CO1,CO5,CO7	Discuss how physiological and anatomical changes in the female genital tract during pregnancy impact its function, including adaptations during labor and delivery,	4	Practical4.3	PSY-GUD	Shows-how	CBL,D,DIS,PrBL
CO1,CO5,CO7	Perform and adapt techniques to demonstrate physiological and anatomical changes in the female genital tract during pregnancy, and modify these techniques to identify and explain pathological conditions using clinical models or imaging tools.	4	Experiential-Learning4.2	PSY-ADT	Does	CD,CBL,D,D-M,DIS,PER

Unit 3 دوران نفاس زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحی تغیرات **Physiological and anatomical changes in female genital tract during Puerperium**

4.3.1 Changes in female genital tract during Puerperium

References: 3,6,7,17,18

3A	3B	3C	3D	3E	3F	3G
CO1,CO5,CO7	Describe the Physiological and anatomical changes in female genital tract during Puerperium	2	Lecture	CC	Knows-how	FC,L&PPT
CO1,CO5,CO7	Performs and documents a complete postpartum clinical examination to assess physiological and anatomical changes in the female genital tract during the puerperium, identifying normal involution and recognizing deviations requiring further intervention.	4	Practical4.4	PSY-GUD	Shows-how	CBL,DIS,L_VC,PL,PER

CO1,CO5,CO7	Analyzes postpartum case experiences to evaluate the pattern of anatomical and physiological recovery of the female genital tract, and applies this analysis to individualize care based on deviations from expected puerperal changes	6	Experiential-Learning4.3	PSY-MEC	Does	CD,CBL,DIS,PER,SDL

Unit 4 محیطِ سنواتِ انقطاع حیض اور انقطاع حیض کے دوران زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحاتی تغیرات Physiological and anatomical changes in female genital tract during climacteric and menopause.

4.4.1 Changes in female genital tract during climacteric and menopause

References: 2,3,4,6,7

3A	3B	3C	3D	3E	3F	3G
CO1,CO5,CO7	Describe the Physiological and anatomical changes in female genital tract during climacteric and menopause	3	Lecture	CE	Knows-how	L,L&PPT
CO1,CO5,CO7	Identify and examine the physiological and anatomical changes in the female genital tract during climacteric and menopause through pelvic examination, clinical case reviews, and interpretation of relevant investigation findings.	4	Practical4.5	PSY-GUD	Shows-how	CBL,D-BED,ECE,L_VC,PAL,TBL
CO1,CO5,CO7	Analyze the impact of menopausal changes on the female genital tract and apply appropriate diagnostic and counseling strategies by participating in case-based discussions, patient interviews, and menopausal clinic observations	5	Experiential-Learning4.4	PSY-MEC	Does	CBL,DIS,PER
CO1,CO5,CO7	Demonstrate understanding of menopausal changes in the female genital tract by conducting health education sessions, interacting with perimenopausal women, and reflecting on patient experiences to propose individualized care strategies.	5	Experiential-Learning4.5	PSY-MEC	Does	CBL,DIS,FV,PER,W

Practical Training Activity

Practical 4.1 : Assessment of Pubertal Changes

Total learning hours(4 hours)

1. Demonstration of Pubertal Staging (60 minutes):
The session begins with a teacher-led demonstration using charts, models, or multimedia to explain the Tanner stages and normal anatomical and hormonal changes occurring during puberty. Differences in physiological development during adolescence, such as changes in breast, pubic hair, and genitalia, are highlighted. Clinical tools like growth charts and hormone reference ranges are introduced for better understanding of pubertal norms.

2. Brainstorming on Puberty-Related Disorders (45 minutes):
In small groups, students participate in a brainstorming session where they list causes and signs of precocious and delayed puberty. They discuss the role of nutrition, endocrine disorders, genetic factors, and systemic illnesses. The teacher facilitates discussion, prompting students to connect symptoms with possible pathophysiological mechanisms.

3. Case-Based Learning and Clinical Correlation (60 minutes):
Students are given clinical cases of adolescents presenting with early or delayed pubertal signs. They analyze history, physical findings, and basic lab investigations to identify whether the presentation is physiological, pathological, or variant. Cases include examples of constitutional delay, hypothyroidism, central precocious puberty, and others. Each group presents their diagnostic reasoning and proposed management.

4. Student Presentations and Expert Feedback (45 minutes):
Each group prepares a brief presentation summarizing their case findings, diagnosis, and recommended investigations or referrals. The teacher provides feedback on clinical accuracy, differential diagnosis, and treatment planning. Students are encouraged to ask questions and relate cases to theoretical knowledge.

5. Recap and Integration Discussion (30 minutes):
To conclude, the teacher facilitates a discussion summarizing the key anatomical and physiological transitions during puberty, and the clinical red flags for abnormal development. Emphasis is placed on early identification, proper referral, and multidisciplinary care.

Practical 4.2 : Pregnancy Examination Skills

Total learning hours(4 hours)

1. Tutorial on Pregnancy-Related Changes (45 minutes):
The session begins with a brief tutorial led by the teacher explaining the systematic physiological and anatomical changes in the female genital tract during pregnancy. This includes uterine enlargement, cervical softening (Goodell's sign), vaginal vascularity (Chadwick's sign), and hormonal influences. Abnormal changes such as incompetent cervix, cervical fibroids, or abnormal uterine growth patterns are also discussed.

2. Demonstration Using Anatomical Models (60 minutes):
The teacher then demonstrates these changes using 3D pelvic models or cross-sectional anatomical charts. Students observe how the uterus, cervix, and vagina adapt during each trimester. Pathological examples, such as asymmetrical uterine enlargement (molar pregnancy), cervical shortening, or uterine anomalies, are discussed for comparative understanding.

3. Simulation-Based Skill Session (60 minutes):
Students participate in simulation activities using physical models or virtual tools to palpate and identify pregnancy-related changes. They simulate uterine size estimation,

fundal height measurement, and recognition of cervical changes, and differentiate between normal and abnormal presentations. The focus is on practical recognition and early detection of complications.

4. Guided Demonstration and Interpretation (45 minutes):
The teacher presents real or simulated cases with visual aids or patient charts showing clinical signs (e.g., bleeding, pain, abnormal discharge) and guides students through clinical interpretation of findings in light of anatomical and physiological knowledge. Students are asked to identify whether the changes are physiological or suggest complications like ectopic pregnancy, threatened abortion, or placenta previa.

5. Summary and Q&A Discussion (30 minutes):
The session concludes with a recap discussion, emphasizing the diagnostic importance of identifying normal vs. abnormal genital tract changes during pregnancy. Students are encouraged to reflect on how this knowledge aids in antenatal care and early intervention.

Practical 4.3 : Genital Tract Function During Pregnancy

Total learning hours(4 hours)

1. Case-Based Learning on Pregnancy Progression (60 minutes):
The session begins with clinical case scenarios of pregnant women at different trimesters. Students analyze changes such as uterine growth, cervical softening, and pelvic floor adaptations, and discuss how these modifications facilitate fetal development and prepare the body for labor. They assess cases involving preterm labor, abnormal fetal position, or ineffective uterine contractions, linking them with structural-functional changes.

2. Demonstration of Labor Mechanisms (60 minutes):
Using anatomical models and charts, the teacher demonstrates how the cervix effaces and dilates, the uterus contracts, and the vagina stretches to allow fetal descent. The demonstration also covers pelvic joint relaxation, uterine axis changes, and perineal support, showing how normal physiology facilitates childbirth. Abnormal scenarios such as failure to progress or cervical dystocia are also included.

3. Group Discussion and Concept Integration (45 minutes):
Students participate in a guided discussion, comparing how normal and abnormal anatomical or hormonal variations can alter labor outcomes. They explore the role of oxytocin, prostaglandins, and relaxin, and how dysfunctions may necessitate interventions such as induction, cesarean section, or instrumental delivery.

4. Project-Based Group Task (60 minutes):
In small groups, students work on a mini project: preparing a visual or digital model/chart showing the progression of anatomical and functional changes from early pregnancy through labor. Each group presents their project, highlighting the correlation between structure and function, and proposes how deviations lead to common obstetric complications.

5. Wrap-up and Reflective Insights (15 minutes):
The session concludes with a reflective Q&A where students share insights gained. The teacher summarizes key takeaways, emphasizing the importance of understanding normal physiological transitions and their role in safe delivery outcomes.

Practical 4.4 : Puerperium learning Module

Total learning hours(4 hours)

1. Case-Based Learning: Postpartum Presentations (1 hour)

Teachers present multiple structured postpartum case scenarios (e.g., normal involution, subinvolution, secondary postpartum hemorrhage, puerperal sepsis). Each case includes clinical history, vital signs, physical findings, and basic lab reports. Students are divided into groups to analyze each case and determine whether the postpartum process is within normal physiological limits or indicative of complications. The teacher facilitates case rotation among groups and prompts clinical reasoning questions to deepen understanding.

2. Clinical Examination Demonstration & Practice (1 hour)

Teachers demonstrate a systematic postpartum examination using a clinical mannequin or pelvic model. This includes abdominal palpation for uterine involution, perineal inspection, lochia assessment, vital signs monitoring, and breast examination. Students then perform a simulated examination in pairs under supervision, documenting their findings. Teachers observe, correct technique, and ensure proper understanding of expected postpartum physiology.

3. Peer-Led Group Discussions: Differentiating Normal vs Abnormal (1 hour)

Student groups discuss findings from simulated examinations and case scenarios. Each group is assigned either a “normal” or “abnormal” postpartum course and is tasked with listing key indicators and warning signs. Teachers moderate the discussion, guiding students to compare parameters such as fundal height, lochia progression, uterine tone, and signs of infection or hemorrhage. This reinforces the ability to distinguish between physiological involution and pathological deviations.

4. Student Presentations & Documentation Review (1 hour)

Each group presents their assigned case with emphasis on postpartum findings, documentation style, and clinical interpretation. Teachers assess the clarity of documentation, the appropriateness of terminology (e.g., involution, lochia rubra/serosa/alba), and how well students recognized deviations requiring follow-up. Faculty provide feedback on presentation skills and clinical judgment, and conclude with a summarizing discussion on the importance of accurate postpartum monitoring.

Practical 4.5 : Menopausal Assessment Skills Training

Total learning hours(4 hours)

1. Demonstration and skill training (45 minutes)
The teacher demonstrates clinical examination techniques for assessing menopausal changes, including pelvic examination, bone health assessment, and cardiovascular evaluation
Students observe and take notes for reference in their logbook

2. Case-based learning CBL (45 minutes)
Students are provided with clinical cases illustrating normal and abnormal menopausal changes
Under teacher guidance, they analyze cases, identify symptoms, and correlate them with physiological changes
Students document key findings and management approaches in their record book

3. Smulation-based learning (60 minutes)
Students practice clinical examination techniques on mannequins or standardized patients to assess menopausal changes
Guided feedback is provided on technique, accuracy, and interpretation of findings
Students document their observations and improvements in their log book

4. Peer-assisted learning PAL (45 minutes)
Students work in pairs or small groups to practice and teach each other clinical assessment techniques related to menopause
The teacher supervises and provides corrections as needed
Students record their learning experiences and challenges in their log book

5. Objective structured clinical examination OSCE (25 minutes)
Students rotate through structured OSCE stations focusing on different aspects of menopausal assessment, such as symptom recognition, examination techniques, and case analysis
Teacher evaluates their performance and provides individualized feedback
- students document their strengths and areas for improvement in their record book

6. Post-activity wrap-up (15 minutes)
Teacher facilitates a discussion on the significance of assessing menopausal changes and their clinical impact
Students share insights and challenges faced during practical sessions
Feedback is provided on overall performance and areas for further skill development

7. Instructions for record book and log book (5 minutes)
Students must document their experiences, clinical assessments, case analyses, and peer learning sessions
Reflections on skill development, challenges faced, and corrections made should be included
The log book will be reviewed for assessment and constructive feedback

Experiential learning Activity

Experiential-Learning 4.1 : Pubertal Assessment and Teaching

Total activity hours(6 hours)

Students will engage in hands-on practice, case analysis, independent assessments, literature review, and undergraduate teaching.

1. Demonstration (60 minutes): Explanation and demonstration of Tanner staging and pelvic examination techniques using models. Students observe and document key steps in their log book.

2. Team-based learning/Group Practice – Pubertal Staging (60 minutes): Students practice Tanner staging on anatomical models in small groups. Supervised assessment with real-time feedback. Literature review assigned on pubertal disorders for deeper understanding.

3. Simulated Clinical Examination (60 minutes): Paired practice of pelvic examination techniques on models. Observation, feedback, and refinement of techniques. Students document findings and relate them to scientific literature.

4. Case Simulation and Undergraduate Teaching (60 minutes)
Clinical case discussions on normal, precocious, and delayed puberty. Students assess cases, propose diagnoses, and document reasoning. Peer teaching session where students explain puberty-related concepts to undergraduates.

5. Independent Patient Assessment (60 minutes)
Students conduct a complete pubertal assessment on a standardized patient or mannequin.
Self-evaluation, teacher feedback, and literature-based comparison of findings.

6. Case Presentation and Academic Contribution (60 minutes)
Students present atleast one case findings and engage in peer discussions. Final reflections and knowledge-sharing with undergraduates. Encouragement to write a case report or literature review if applicable.

7. Log Book/Record File Instructions
Students must record observations, techniques practiced, case analysis, and undergraduate teaching reflections.
Literature search findings and academic contributions should be documented.
The log book will be reviewed for assessment and feedback.

Experiential-Learning 4.2 : Pregnancy-Related Genital Changes Simulation

Total activity hours(4 hours)

1. Student-Led Presentation on Pregnancy Physiology (45 minutes)

Students prepare and deliver short presentations in pairs or small groups on specific physiological and anatomical changes during pregnancy. Topics are divided among students (e.g., uterine enlargement, cervical softening, vaginal changes, hormonal influence). Each group uses clinical images, diagrams, or models to support their explanation. Peer questions are encouraged to reinforce learning and engagement.

2. Hands-On Demonstration with Anatomical Models (1 hour)

Students perform guided demonstrations using obstetric and pelvic models to show trimester-wise changes in the female genital tract. Each student identifies and demonstrates features such as uterine position, cervical changes, and adaptation of pelvic structures. Peers observe and provide feedback based on anatomical accuracy. Faculty supervise and assist where necessary to ensure proper understanding.

3. Image Interpretation and Pathological Case Identification (1 hour)

Students work in small groups to analyze clinical images such as ultrasound scans and MRI plates showing normal and pathological conditions (e.g., placenta previa, cervical incompetence, bicornuate uterus). They identify abnormalities and correlate them with clinical symptoms provided in short case vignettes. Each group presents their diagnosis and explains how the pathological change differs from normal physiology.

4. Case-Based Group Discussion and Clinical Application (1 hour 15 minutes)

Students are given case scenarios involving pregnant patients with possible complications. Using anatomical models and their image analysis experience, they identify abnormal changes, discuss possible diagnoses, and suggest appropriate clinical responses. Each group presents their findings and participates in a discussion comparing physiological and pathological findings.

Experiential-Learning 4.3 : Postpartum case experiences

Total activity hours(6 hours)

1. Self-Directed Review of Puerperal Physiology (45 minutes)

Each student begins with an independent review of provided digital or printed learning material covering normal postpartum changes—uterine involution, cervical recovery, lochia progression, vaginal and pelvic floor restoration, and hormonal changes. Visual aids like diagrams and clinical timelines are included to reinforce baseline understanding.

2. Independent Case Study Analysis (1 hour 30 minutes)

Each student receives 2–3 different postpartum case scenarios—ranging from normal recovery to clinical deviations such as delayed involution, infection, hemorrhage, or emotional disturbances. Students read, interpret clinical data (e.g., lochia description, fundal height, pain, fever), and analyze whether the case follows normal recovery or suggests pathology. They document their findings in a structured worksheet.

3. Individual Pattern Mapping and Clinical Reasoning (1 hour 30 minutes)

Using templates provided, each student independently creates a recovery map comparing expected vs. observed postpartum patterns for each case. They identify clinical red flags and deviations, explain possible causes, and propose appropriate individualized care—such as additional monitoring, treatment, or referral. Each student prepares a concise written care plan for each case.

4. Case Presentation (1 hour)

Students present one selected case from their set through a short oral or visual presentation. They explain the recovery status, identify any deviations, justify their analysis with clinical reasoning, and outline a tailored postpartum care plan. Presentations may be done in front of peers or submitted as recorded videos or slides with narration, depending on setup.

5. Reflective Writing and Summary (1 hour 15 minutes)

Each student completes a reflective write-up explaining how analyzing postpartum cases enhanced their understanding of female genital tract recovery. They also reflect on how this knowledge would influence their future clinical practice. The session concludes with a faculty-led debrief summarizing key learning points and addressing any queries.

Experiential-Learning 4.4 : Climacteric Case-Based Learning

Total activity hours(5 hours)

1. Case-Based Self Analysis (1 hour 30 minutes)

Each student independently studies a set of menopausal case scenarios covering issues such as vaginal atrophy, dryness, dyspareunia, urinary complaints, and prolapse. Students identify clinical features, hormonal influences, and anatomical changes. They then analyze the case to determine the appropriate investigations (e.g., pelvic exam, hormonal profile) and suggest diagnostic strategies, documenting their decisions using a structured clinical reasoning format.

2. Individual Observation in Menopausal Clinic (1 hour 30 minutes)

Students attend a live or simulated menopausal clinic session, observing patient-doctor interactions focused on complaints related to genital tract changes. They independently note patient symptoms, clinical approach, communication style, and counseling techniques. A reflection sheet is used to document observed diagnostic processes and how the practitioner addressed both physical and emotional aspects of menopause.

3. Patient Interview Practice (1 hour)

Each student conducts a one-on-one structured interview with a menopausal patient (real or standardized/simulated). The student independently gathers history about symptoms affecting the genital tract, psychosocial concerns, and expectations from therapy. Students practice empathetic communication and active listening. Interview responses are recorded in a guided case sheet format and later analyzed to formulate a brief care approach.

4. Individual Case Presentation and Counseling Plan (1 hour)

Students prepare and deliver a solo case presentation based on either their observed or interviewed case. The presentation includes identified menopausal changes, diagnostic suggestions, and a personalized counseling plan. This includes lifestyle advice, local or systemic hormone options, and referral criteria. Faculty or peer feedback is given at the end to enhance clinical and communication skills.

Experiential-Learning 4.5 : Perimenopausal women individualized care strategies

Total activity hours(5 hours)

1. Field Visit and Patient Interaction – 1 hour 30 minutes

Students begin the session by visiting a community health center or gynecology outpatient department where they individually interact with perimenopausal women. They observe and record patient complaints related to changes in the genital tract, including symptoms like dryness, irritation, urinary discomfort, and sexual health concerns. During this time, students focus on active listening, noting emotional expressions and cultural sensitivities, which will help them later in designing care strategies and education plans.

2. Workshop on Menopausal Physiology and Counseling – 1 hour 15 minutes

After returning from the field visit, students participate in an interactive workshop where they revisit the hormonal and anatomical changes occurring during menopause. The faculty explains the physiological basis of symptoms, diagnostic approaches, and common management strategies including hormonal and non-hormonal options. Students also receive guidance on developing health education content tailored to menopausal women's needs and local context.

3. Designing and Delivering Health Education Session – 1 hour

Each student independently prepares and delivers a short health education session targeted toward perimenopausal women, using charts, models, or digital aids. The content includes understanding menopausal changes, hygiene, lifestyle tips, and when to seek medical help. The session is either delivered to real patients during outreach or to simulated patients under faculty supervision. Emphasis is placed on clear communication, empathy, and cultural appropriateness.

4. Reflective Discussion and Individualized Care Planning – 1 hour 15 minutes

In the final phase, students engage in a reflective discussion moderated by faculty, where they share experiences from the field, describe patient concerns, and analyze how menopause impacted the female genital tract both physically and emotionally. Based on this reflection, each student drafts an individualized care strategy incorporating patient education, symptom relief, and referral planning. The reflection and care plan are submitted for assessment.

Modular Assessment

Assessment method	Hour
Instructions: Conduct a structured modular assessment. Assessment will be for 50 marks . Keep a structured marking pattern. Use different method in each module for the semester. Keep a record of the structured pattern used for assessment. Calculate the modular grade point as per table 6C 1. Case-base evaluation/problem-based evaluation: (25 marks) Each student will be given a case history or problem situation to diagnose the normal and abnormal changes in genital organs during puberty, pregnancy, puerperium and menopause. OR 2. Bedside viva-voce: (25 marks) assessment can be done at bedside by asking questions on the patients 3. Power point presentation/ Experiential record can be taken as assessment. (25 marks) OR Any practical in converted form can be taken for assessment. (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as assessment. (25 marks) (Total marks 50)	4

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 5 : نظام تولید زنانہ سے متعلق نظام لاقانی Endocrinology related to female reproductive system						
Module Learning Objectives **(At the end of the module, the students should be able to)** 1. Explain the roles of hypothalamus, pituitary, ovaries, and adrenal glands in regulating thePuberty, menstrual cycle, ovulation, and pregnancy and menopause. 2. Interpret hormonal changes during puberty, pregnancy, menopause, and their clinical implications. 3. Identify common gynecological disorders and hormonal imbalances and their clinical presentations. 4. Identify endocrine disorders affecting pregnancy, 5. Diagnose reproductive endocrinological conditions using clinical and laboratory assessments.						
Unit 1 زیر عرتی، غدہ نخاعیہ۔ میصین کے سبیل کا منافع الاعضائی بیان Physiology of Hypothalamo-Pituitary-Ovarian Axis 5.1.1 Component of hypothalamo- pituitary and ovarian (H-P-O) axis, its applied physiology and feedback mechanisms (positive and negative feedback) 5.1.2 Disorders related to hypothalamo- pituitary and ovarian(H-P-O) axis **References:** 1,2,4,6,9,10,11,15,16						
3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO6	Describe and discuss the anatomical components of the hypothalamic-pituitary-ovarian (H-P-O) axis, highlighting roles in regulating reproductive function.	1	Lecture	CE	Knows-how	L,L&PPT ,L_VC
CO1,CO2,CO6	Discuss the feedback mechanisms (positive and negative feedback) regulate the H-P-O axis	1	Lecture	CC	Knows-how	DIS,FC,L&PPT
CO1,CO2,CO6	Demontrate the physiological processes regulated by the H-P-O axis	2	Practical5.1	PSY-GUD	Shows-how	D,D-M,DIS,PER,SIM

CO1,CO2,CO6	Analyze the impact of environmental and physiological factors on H-P-O axis.	2	Practical5.2	CAN	Shows-how	CBL,D,DIS,LRI,L_VC,ML,RLE
CO1,CO2,CO6	Identify common disorders related to dysregulation of the H-P-O axis	3	Experiential-Learning5.1	PSY-MEC	Does	CD,CBL,RLE
CO1,CO2,CO6	Illustrate and interpret the hormonal interactions within the hypothalamo-pituitary-ovarian axis , and its clinical correlation with menstrual and ovulatory disorders	3	Experiential-Learning5.2	PSY-MEC	Does	CBL,DL,DIS,LRI,SIM

Unit 2 تولیدی ہارمون کے افعال Role of reproductive Hormones

5.2.1 Overview of reproductive hormone

5.2.2 Hormonal changes from puberty to menopause

5.2.3 Clinical examination and history-taking

5.2.4 Hormonal profiles in normal and abnormal conditions

References: 1,2,19,20,21,22,23,24,25,31

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO6	Describe the overview of reproductive hormones.	1	Lecture	CC	Knows-how	FC,L&GD
CO1,CO2,CO6	Discuss the hormonal changes from Puberty to Menopause and their effect on the reproduction	2	Lecture	CC	Knows-how	BS,FC,L&GD,L&PPT
CO1,CO2,CO6	Illustrate Recent Advances in reproductive hormone physiology	1	Lecture	CAN	Knows-how	BL,LS,SY,TUT
CO1,CO2,CO6	Perform comprehensive history-taking and clinical examination to assess patients with reproductive endocrinology disorders, and accurately document relevant findings.	3	Practical5.3	PSY-GUD	Shows-how	CBL,D-BED,D-M,RLE
CO1,CO2,CO6	Analyze and interpret case discussions involving laboratory data and clinical findings related to the H-P-O axis	3	Practical5.4	PSY-GUD	Shows-how	CD,CBL,D,D-BED,DIS,LRI,PER,PrBL

CO1,CO2,CO6	Demonstrate the practical application of dietary recommendations (Ilaj bil Ghiza) and safe exercise regimens (Ilaj bil tadbeer) for the women with reproductive endocrinopathies	2	Practical5.5	PSY-GUD	Shows-how	CBL,D,DIS,PER
CO1,CO2,CO6	Perform patient assessments to identify common disorders related to reproductive endocrinology through observation and participation.	3	Experiential-Learning5.3	PSY-MEC	Does	CD,CBL,D,D-BED,RLE
CO1,CO2,CO6	Analyze hormonal profiles in normal and abnormal conditions, understanding implications for reproductive health.	4	Experiential-Learning5.4	CAN	Knows-how	CD,CBL,DIS,LRI
CO1,CO2,CO6	Integrate a multidisciplinary approach by collaborating with endocrinology and reproductive medicine specialists to develop comprehensive management plans for complex reproductive health conditions.	3	Experiential-Learning5.5	AFT-SET	Does	CBL,DIS

Unit 3 مشیمائی ہارمون Placental Hormones

5.3.1 Physiological roles of placental hormones

5.3.2 Impact of environmental factors on placental function

References: 1,2,3,4,5,6,15,16,20,21,22,23,24,25,26,31

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO6	Discuss overview of placental hormone and its types	1	Lecture	CC	Knows-how	FC,L&PPT ,TUT
CO1,CO2,CO6	Illustrate the physiological Roles of Placental Hormones during pregnancy	1	Lecture	CC	Knows-how	L&GD,L&PPT ,TUT
CO1,CO2,CO6	Discuss pathophysiological implications of placental hormone imbalance	2	Lecture	CC	Knows-how	L&PPT ,SY,TUT
CO1,CO2,CO6	Analyze case studies on synthetic hormones in high-risk pregnancies.	3	Practical5.6	CAN	Knows-how	CBL,D-BED,DIS,PER,RP,SIM
CO1,CO2,CO6	Demonstrate application of classical texts, clinical trials on hormone therapy in pregnancy, and up-to-date guidelines in clinical practice.	3	Practical5.7	PSY-GUD	Shows-how	D,DIS,LS,PER
CO1,CO2,CO6	Illustrate changes in placental function caused by environmental factors	2	Practical5.8	PSY-GUD	Shows-how	CBL,D,D-BED,PER,SIM

CO1,CO2,CO6	Demonstrate the skill of assessing placental hormone levels (e.g., progesterone, hPL) and interpret their clinical implications in conditions such as miscarriage, gestational diabetes, and preterm labor with increasing accuracy and coordination	3	Experiential-Learning5.6	PSY-MEC	Does	CBL,D-BED,RP,SIM
CO1,CO2,CO6	Manage hormonal therapies for patients experiencing preterm labor or miscarriage.	4	Experiential-Learning5.7	PSY-ADT	Does	DIS,JC,RP,TUT
CO1,CO2,CO6	Analyze the long-term effects of fetal hormonal imbalances on adult health.	3	Experiential-Learning5.8	CAN	Knows-how	CBL,DIS,RLE,RP,SIM

Practical Training Activity

Practical 5.1 : H-P-O Axis Simulation

Total learning hours(2 hours)

1. Teacher Demonstration with Model – 30 minutes

The teacher will use a 3D anatomical model or digital animation to demonstrate the anatomical components and hormonal regulation involved in the H-P-O axis. Key points will include the role of GnRH, FSH, LH, estrogen, and progesterone, with emphasis on feedback loops.

2. Interactive Presentation and Discussion – 30 minutes

Following the demonstration, a PowerPoint presentation will visually summarize the cyclical hormonal interactions during the menstrual cycle, ovulation, and luteal phase. This will be followed by a guided class discussion where students will answer concept-based questions and link the physiological processes to clinical scenarios (e.g., PCOS, amenorrhea).

3. Group-Based Diagram Construction – 30 minutes

Students will work in small groups to construct flowcharts or mind maps representing the H-P-O axis and its physiological outcomes. Each group will then briefly explain their diagram to the class, reinforcing learning through peer explanation and correction.

4. Library/Resource Session – 30 minutes

Students will be directed to selected textbooks, research articles, or digital content to explore advanced aspects of H-P-O regulation (e.g., disruptions, clinical implications). They will make brief notes or summaries to share in the next class or as formative assesesement.

Practical 5.2 : H-P-O axis Regulation & Assessment

Total learning hours (2 hours)

1. Teacher-Led Conceptual Review & Model Demonstration – 30 minutes

The session begins with a concise overview of the H-P-O axis, followed by a model-based demonstration highlighting key feedback mechanisms and how normal regulation occurs. The teacher will then introduce examples of physiological (e.g., stress, malnutrition, exercise) and environmental (e.g., endocrine disruptors, toxins) factors that can alter axis function.

2. Case-Based Group Discussion – 30 minutes

Students will be divided into small groups and assigned brief case scenarios (e.g., athletic amenorrhea, PCOS, delayed puberty due to malnutrition, environmental toxin exposure). Each group will analyze the scenario and identify which part of the H-P-O axis is affected, the mechanism of disruption, and its clinical consequences. Findings are shared with the class for peer learning and feedback.

3. Diagram Construction and Concept Mapping – 30 minutes

Each group will then construct a concept map or diagram illustrating the interaction between environmental/physiological factors and the H-P-O axis. This helps visually reinforce connections and supports analytical thinking.

4. Resource Exploration and Reflection – 30 minutes

Students will spend time with selected resources (digital content, textbook references, or short articles) to further investigate real-world evidence of H-P-O axis disruption. They will make brief reflective notes on one factor of interest, to be submitted or discussed in the next session.

Practical 5.3 : Reproductive Endocrinology Aassessment

Total learning hours(3 hours)

1. **Teacher Demonstration (30 minutes)**

Introduction to structured history-taking for reproductive endocrine disorders (e.g., PCOS, amenorrhea, thyroid dysfunction), followed by a demonstration of relevant clinical examinations on a mannequin or standardized patient.

2. **Peer Practice & Supervised Hands-On Examination (60 minutes)**

Students practice history-taking in pairs using role-play, then perform general and systemic clinical examinations (e.g., BMI, hirsutism scoring, thyroid and pelvic assessment) under faculty supervision.

3. **Case-Based Learning & Application (60 minutes)**

Teacher presents clinical cases with Q&A to guide students through differential diagnosis and investigations. Each student then performs an independent full history and exam for assessment with feedback.

4. **Logbook Documentation (15 minutes)**

Students record history details and examination findings, including systemic and pelvic assessments, as well as case impressions, for logbook verification.

5. **Reflection & Wrap-Up (15 minutes)**

Students share key takeaways from the cases, diagnostic considerations, and management approaches, followed by faculty feedback and clarification.

Practical 5.4 : Clinical findings and lab data related to H-P-O axis

Total learning hours (3 hours)

1. **Conceptual Overview by Teacher (30 minutes)**

Brief explanation of the H-P-O axis, hormonal regulation (GnRH, FSH, LH, estrogen, progesterone), feedback mechanisms, and relevance in disorders like PCOS, hypothalamic amenorrhea, and hyperprolactinemia.

2. **Case-Based Interpretation & Lab Correlation (90 minutes)**

Students analyze three clinical cases (Amenorrhea, PCOS, Hyperprolactinemia), interpret hormone assay results, correlate with imaging and clinical signs, and discuss diagnoses and management strategies under faculty guidance.

3. **Student-Led Presentations & Logbook Work (45 minutes)**

Groups present findings from each case. Faculty provides feedback and clarifications. Students document case interpretations and learning reflections in their logbooks for sign-off.

4. **Summary Discussion & Q&A (15 minutes)**

Recap of key concepts, clarification of doubts, and reinforcement of the clinical application of H-P-O axis knowledge.

Practical 5.5 : Lifestyle Intervention for Reproductive Endocrinopathies

Total learning hours (2 hours)

1. Teacher Demonstration (40 minutes)
The session begins with a 10-minute interactive introduction highlighting the importance of lifestyle interventions (Ilaj bil Ghiza and Ilaj bil Tadbeer) in managing reproductive endocrinopathies like PCOS and hypothyroidism. The teacher then demonstrates dietary modifications for these conditions using case-based examples, food models, and culturally relevant meal plans (15 minutes). This is followed by a demonstration of safe and effective physical activities (15 minutes), including exercise, walking, and strength training, with emphasis on safety and hormonal relevance.

2. Student-Led Dietary Planning (20 minutes)
Students are divided into pairs and given clinical scenarios for which they develop customized dietary plans. They present their charts to the group, receiving feedback from both peers and the instructor to refine their approach.

3. Student-Led Exercise Demonstration (20 minutes)
Each student demonstrates an assigned exercise regimen relevant to their clinical case and instructs a peer while the teacher supervises. Focus is placed on accuracy, patient safety, and adapting the regimen to individual patient needs.

4. Case-Based Integration and Application (20 minutes)
Students apply both Ilaj bil Ghiza and Ilaj bil Tadbeer strategies to integrated patient cases. They discuss possible patient barriers, cultural considerations, and counseling approaches in small groups, facilitated by the teacher.

5. Post-Activity Wrap-Up and Assessment (20 minutes)
The session concludes with a short quiz or oral review, allowing students to consolidate their learning. A reflective discussion follows, and students complete logbook entries summarizing key concepts, individual performance, and feedback received.

Practical 5.6 : High risk pregnancy and synthetic hormones

Total learning hours(3 hours)

1. Teacher Demonstration (15 min)
Overview of synthetic hormones (e.g., progesterone, corticosteroids, insulin), clinical indications, protocols, and case selection criteria.

2. Case Study Demonstration by Teacher (30 min)
Stepwise analysis of a high-risk case with clinical decision-making and outcome correlation.

3. Interactive Q&A (15 min)
Clarification of concepts, promotion of critical thinking and clinical reasoning.

4. Small Group Activity (30 min)
Students divided into small groups; each assigned a high-risk pregnancy case involving hormone use.

5. Student-Led Role Play & Case Analysis (15 min)
Students analyze the case and perform role-play to simulate clinical decision-making and communication.

6. Peer Review & Instructor Feedback (15 min)
Group presentations followed by constructive feedback on hormone selection and justification.

7. Individual Demonstration & Logbook (30 min)
Each student presents a mini-case and discusses hormone therapy choices. Instructor observes and verifies logbook entries.

8. Reflection & Log Book Entry (15 min)
Students document key decisions, learnings, and reflections for instructor validation.

9. Wrap-Up & Oral Assessment (15 min)
Summary, brief oral assessment, and final clarification of clinical applications.

Practical 5.7 : Clinical Hormone therapy Simulation

Total learning hours (3 hours)

1. **Introduction & Overview (15 minutes)**

Teacher provides a brief on classical texts and current guidelines (ACOG, NICE, WHO) related to hormone therapy in pregnancy, addressing student queries.

2. **Teacher Demonstration (45 minutes)**

Demonstration of clinical application of progesterone, estrogen, and HCG across early pregnancy, high-risk conditions, and postpartum care, supported by key clinical trial insights (e.g., PROMISE, low-dose aspirin use in preeclampsia).

3. **Student Group Activity & Roleplay (90 minutes)**

Students work in groups or individually on assigned clinical scenarios (e.g., recurrent miscarriage, preterm labor, gestational hypertension).
They analyze the case, decide hormone therapy regimens, justify using classical and evidence-based references, and role-play physician-patient interactions.

4. **Student Demonstrations & Peer Review (30 minutes)**

Groups demonstrate their treatment plans including dose, route, and rationale.
Feedback is provided by peers and teacher to reinforce correct application of protocols.

5. **Logbook Documentation**

Each student documents the case, chosen therapy, supporting clinical evidence, and reflections from peer feedback and demonstration experience.

Practical 5.8 : Environmental Impact on Placenta

Total learning hours(2 hours)

1. Introduction & Teacher Demonstration (20 minutes)
Brief overview of environmental impacts on placental function (e.g., smoking, infections, malnutrition) followed by demonstration of histological slides highlighting key structural changes like calcification, infarcts, and villous abnormalities.

2. Case-Based Learning (20 minutes)
Presentation of a real-life placental pathology case, with group Q&A to explore underlying causes and fetal implications.

3. Student Slide Examination & Documentation (30 minutes)
Students (individually or in small groups) examine normal vs. affected placental histology via microscope or video slides, identify key changes, and document observations in their logbooks.

4. Group Presentation & Simulation (30 minutes)
Each group presents their findings, followed by a simulation using models to illustrate placental blood flow alterations and their fetal outcomes.

5. Discussion, Feedback & Reflection (20 minutes)
Teacher-led feedback session, clinical correlation discussion, and final reflection with logbook entry on key learnings.

Experiential learning Activity
Experiential-Learning 5.1 : Disorders of H-P-O axis
Total activity hours(3 hours) **1. Clinical Case Presentation (60 minutes)** Each student will present at least five clinical cases related to H-P-O axis disorders (e.g., PCOS, hypogonadotropic hypogonadism, premature ovarian failure) with diagnostic findings, management plans, and patient outcomes. **2. Pathological Case Analysis (30 minutes)** Students will analyze three or four pathological case reports of H-P-O axis disorders, correlating histopathology with clinical diagnosis and treatment outcomes. Findings will be documented in the logbook. **3. Hormonal Assay Interpretation (30 minutes)** Students will individually interpret at least three hormonal assay reports (FSH, LH, estradiol, AMH) related to H-P-O axis disorders and correlate them with clinical conditions. **4. Pelvic Ultrasound Interpretation (30 minutes)** Students will analyze two or three ultrasound images of patients with suspected H-P-O axis dysregulation (e.g., polycystic ovaries, ovarian atrophy) and correlate findings with clinical and laboratory data. **5. Clinical Examination of Patients (30 minutes)** Each student will perform clinical examinations on at least two patients suspected of having H-P-O axis disorders, focusing on menstrual history, secondary sexual characteristics, and signs of endocrine imbalance. Documentation: Each student will record their observations and interpretations in the logbook under faculty supervision.
Experiential-Learning 5.2 : Hormonal interactions within hypothalamo-pituatory-ovarian axis
Total activity hours(3 hours) **1. Case-Based Discussion (CBD) (45 min)** Each student will present at least four clinical cases demonstrating HPO axis dysfunction (e.g., PCOS, hypothalamic amenorrhea, premature ovarian failure). Case summaries and key learning points in the logbook.

2. Hormonal Assay Interpretation (30 min)
Each student will interpret at least three laboratory reports (FSH, LH, estradiol, prolactin, AMH) related to ovarian function.
Findings, normal vs. abnormal patterns, and clinical implications in the logbook.

3. Ultrasound-Based Ovarian Assessment (45 min)
Under supervision, students will observe and analyze at least three transvaginal ultrasound scans demonstrating follicular development or ovarian pathology.
Observations and clinical correlation in the logbook.

4.Simulated Hormonal Regulation Pathway (30 min)
Using a simulation model, students will demonstrate feedback mechanisms of the HPO axis by adjusting hormone levels and predicting physiological responses.
Observations and reflections on the response pattern in the logbook.

5. Group Discussion & Clinical Correlation (30 min)
Students will discuss three to four pathological conditions affecting the HPO axis and their impact on fertility, menstrual cycle regulation, and overall reproductive health.
Summary of discussion points in the logbook.

Experiential-Learning 5.3 : Reproductive endocrinology disorders assesment

Total activity hours (3 hours)

1. Clinical Observation & Logbook Documentation (60 minutes)
Under teacher guidance, students observe a live (or video) demonstration of a patient assessment focusing on reproductive endocrine disorders (e.g., PCOS, thyroid dysfunction, or amenorrhea).
Each student must note key clinical findings—patient history, physical signs, and diagnostic cues—in their logbook. They should record at least four or five significant observations per case.

2. Hands-on Patient Examination (60 minutes)
Students perform a complete physical examination on a simulated patient or consenting volunteer showing symptoms of a reproductive endocrine disorder.
Students individually carry out assessments (including vital signs, pelvic examination, etc.) and then record their findings and techniques in their logbook.

3. Pathological Case Analysis (45 minutes)
Each student is provided with three to four written pathological case scenarios (including lab reports and imaging) relevant to reproductive endocrinology.
Analyze the cases individually to identify the disorder, propose differential diagnoses, and detail assessment parameters. All findings are to be recorded in the logbook.

4. Reflective Group Discussion (15 minutes)
Students reconvene for a group discussion to share insights and challenges encountered during the observation, examination, and case analysis activities.
Each student briefly presents key findings from their logbook, while the teacher facilitates peer feedback and reflective discussion.

Experiential-Learning 5.4 : Hormonal profiles analysis

Total activity hours (4 hours)

1. Case Presentation & Analysis (1 Hour)
Each student will present and analyze at least four (4) clinical cases* involving normal and abnormal hormonal profiles (e.g., PCOS, menopause, hypogonadism).
Findings and analysis must be recorded in the logbook.

2. Laboratory Report Interpretation (1 Hour)
Each student will interpret *three to four (3-4) hormone assay reports (e.g., LH, FSH, estrogen, progesterone, testosterone).
orrelate lab results with clinical conditions and document interpretations in the logbook.

3. Pathological Case Analysis (1 Hour)
Each student will evaluate three to four (3-4) pathological cases related to hormonal disorders (e.g., hormone-secreting tumors, adrenal disorders).
Compare findings with normal physiology and record key observations in the logbook.

4. Clinical Decision-Making Exercise (1 Hour)
Participate in simulated case scenarios to make clinical decisions regarding hormonal therapy and reproductive management.
Justifications for decisions must be documented in the logbook.

Experiential-Learning 5.5 : Management plans for complex reproductive health conditions.

Total activity hours(3 hours)

1. Case-Based Discussions (45 min)
Each student must analyze and present at least four clinical cases involving complex reproductive health conditions (e.g., PCOS, premature ovarian insufficiency, hypogonadism). Students will discuss the cases with faculty and specialists from endocrinology and reproductive medicine. Students must record key case learnings and management approaches in the logbook as per the teacher's instructions.

2. Multidisciplinary Rounds & Collaborative Management (45 min)
Students will attend at least one multidisciplinary team (MDT) meeting involving gynecologists, endocrinologists, and reproductive medicine specialists. Observe patient discussions and contribute to formulating a holistic treatment approach.
Each student will summarize at least two patient cases discussed in the MDT and document the collaborative treatment approach in their logbook.

3. Pathology & Diagnostic Case Analysis (45 min)
Students must analyze and interpret three to four pathology reports or hormonal profiles related to reproductive endocrinology conditions. Compare findings with standard

diagnostic criteria and correlate with clinical presentation.
Each student will record the analyzed cases, key findings, and implications in the logbook.

4. Reflection & Management Plan Development (45 min)
Each student will independently select one complex reproductive case (from their clinical exposure) and develop a detailed multidisciplinary management plan incorporating endocrinological and reproductive medicine perspectives. The student must present their plan to faculty and peers, receiving feedback for refinement.
The final management plan must be documented in the logbook along with reflections on the learning process.

Experiential-Learning 5.6 : Placental hormones assesment

Total activity hours(3 hours)

1. Case-Based Hormonal Analysis (1 Hour)
Each student will analyze at least four clinical cases involving miscarriage, gestational diabetes, or preterm labor.
Collect patient history and hormone test reports (progesterone, hPL). Correlate hormone levels with clinical symptoms. Record findings and interpretations in the logbook.
Faculty will guide students in analyzing patterns and making clinical correlations.

2. Laboratory Interpretation & Diagnostic Skill Development (45 Minutes)
Each student will interpret three laboratory reports related to placental hormones (progesterone, hPL).
Evaluate hormone levels from pathology reports. Compare with normal reference ranges. Suggest clinical implications based on values. Document findings in the logbook.
Faculty will verify interpretations and discuss key diagnostic considerations.

3. Hands-on Simulation of Hormonal Assessment (30 Minutes)
Hands-on training in using ELISA or other relevant lab techniques for hormone assessment.
Observe or assist in processing hormone level tests. Understand the workflow of sample collection, processing, and interpretation. Log observations and methodology in the record book.
Lab instructor or faculty will demonstrate and guide students through procedures.

4. Group Discussion & Clinical Correlation (30 Minutes)
Group discussion where each student presents at least one analyzed case from their logbook.
Discuss findings with peers. Correlate with real-life clinical implications. Identify management strategies based on hormone levels. Faculty will moderate discussion, provide feedback, and clarify doubts.

5. Self-Reflection & Logbook Entry (15 Minutes)
Each student summarizes key takeaways and updates their logbook.
Document insights from case analysis and lab interpretations. Highlight learning points from the group discussion. Faculty will review logbooks and provide feedback.

Experiential-Learning 5.7 : Hormonal Therapy

Total activity hours(4 hours)

1. Clinical Case Presentations (1 Hour)
Each student will present at least 4–5 clinical cases related to preterm labor or miscarriage, focusing on hormonal therapy administration. They will discuss patient history, diagnosis, management, and outcomes.
Logbook Entry: Case summaries with key learning points.

2. Pathological Case Analysis (45 Minutes)
Students will analyze 3–4 pathological cases where hormonal imbalance led to preterm labor or miscarriage. They will compare histopathological findings, hormonal reports, and clinical presentations.
Logbook Entry: Pathology case interpretations with relevant findings.

3. Simulation-Based Hormonal Therapy Administration (45 Minutes)
Each student will demonstrate the administration of progesterone therapy (e.g., IM, vaginal, or oral) using simulation models or real-case scenarios under supervision.
The teacher will assess technique, dosage calculations, and patient counseling.
Logbook Entry: Stepwise procedure documentation with self-reflection.

4. Patient Counseling and Consent Process (30 Minutes)
Students will individually conduct mock counseling sessions on hormonal therapy for preterm labor or miscarriage. They will explain risks, benefits, and alternatives while obtaining informed consent.
Logbook Entry: Summary of counseling interactions with key patient concerns addressed.

5. Case-Based Discussion (30 Minutes)
The teacher will present 2–3 real or simulated cases where hormonal therapy decisions were critical. Students will justify their choices and discuss management strategies.
Logbook Entry: Summary of discussion points and key takeaways.

6. Hands-On Interpretation of Lab Investigations (30 Minutes)
Each student will analyze 3–5 hormonal assay reports (e.g., progesterone, hCG, estradiol) and correlate them with patient conditions.
They will determine the appropriate hormonal therapy based on findings.
Logbook Entry: Interpretation notes with clinical correlation.

Experiential-Learning 5.8 : Long term effects of fetal hormonal imbalances

Total activity hours (3 hours)

1. **Interactive Case-Based Learning (45 minutes)**

Students engage with real or simulated cases involving fetal hormonal imbalances (e.g., congenital adrenal hyperplasia, thyroid dysfunction in pregnancy). Followed by small-group discussions identifying fetal and adult consequences, and presentation of key findings.

2. **Expert Mini-Lecture & Concept Mapping (20 minutes)**

A focused lecture on fetal hormonal pathways, fetal programming, and risks of adult diseases such as metabolic syndrome and infertility, using visual aids like concept maps to reinforce understanding.

3. **Lab/Simulation-Based Analysis (40 minutes)**

Students interpret hormone levels using case-based lab data, identify fetal hormonal disorders, and discuss diagnostic strategies in small groups. Guided analysis reinforces applied clinical learning.

4. **Problem-Solving & Role Play (60 minutes)**

Teams propose long-term management strategies through case-solving and enact physician-patient-family role-plays, focusing on risk communication and preventive counseling. Faculty moderates and provides feedback on clinical reasoning and communication.

5. **Reflection, Summarization & Debrief (15 minutes)**

Groups share key takeaways, followed by a faculty-led wrap-up discussion to reinforce clinical relevance, answer questions, and consolidate learning outcomes.

Modular Assessment

Assessment method	Hour
Instructions - Conduct a structured Modular assessment. Assessment will be for 50 marks . Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. 1.Power point Presentation (25 Marks) Structure: Content Mastery (10 Marks): Accurate explanation of hormonal regulation (e.g., menstrual cycle, PCOS, menopause). Clarity & Organization (5 Marks): Logical flow, clear slides, concise explanations.	4

Application & Critical Thinking (5 Marks): Clinical correlations or case-based examples (e.g., hormonal imbalances). Presentation Skills (5 Marks): Delivery, confidence, and engagement with the audience. 2.Quiz (25 Marks) or MCQs (10 Marks): Focus on hormonal pathways and feedback mechanisms. Short Answer Questions (10 Marks): Evaluate conceptual understanding of disorders like PCOS or hyperprolactinemia. Case-based Scenario (5 Marks): Interpret clinical data or diagnose hormonal disorders OR Any practical in converted form can be taken for assessment. (25 Marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as assessment. (25 Marks) (Total 50 marks)	

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 6 : امراض نسواں و قبالہ کے مبادیات اور ان میں مستعمل یونانی اصول و ضوابط Unani fundamental principles applied in Amrāze Niswān wa Qabālat						
Module Learning Objectives **(At the end of the module, the students should be able to)** 1. Describe the Unani fundamentals in Amrāze Niswān wa Qabālat 2. Apply Unani fundamentals in Amrāze Niswān wa Qabālat 3. Conduct research in Amrāze Niswān wa Qabālat corelating Unani fundamentals with modern scientific parameters						
Unit 1 اعضاء تناسلیہ سے متعلق امور طبیعیہ کی اہمیت Importance of Umūr Ṭabī'iyya concerning A'da' Tanasuliyya 6.1.1 Concept of Arkān, Mizāj, Akhlāt, A'dā', Arwāh, Quwā and Af'āl in understanding the Amrād-i Niswān wa Qabālat **References:** 1,2,3,4,9,21,26,27,34						
3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Describe the concept of Arkān, Mizāj, Akhlāt, A'dā', Arwāh, Quwā and Af'āl in understanding the Amrāz e Niswān wa Qabālat	3	Lecture	CC	Knows-how	FC,L&GD,L&PPT ,SY,TUT
CO1,CO2	Identify the Mizāj of various conditions in Qabālat	2	Practical6.1	PSY-GUD	Shows-how	D,D-BED,JC,PER
CO1,CO2	Identify the Mizāj of various conditions in Amrāze Niswān	2	Practical6.2	PSY-GUD	Shows-how	CBL,D,D-BED,DIS
CO1,CO2	Analyze the Mizāj of various conditions in Amraze Niswan and its significance.	2	Practical6.3	CAN	Shows-how	CBL,D-BED,RLE

CO1,CO2	Formulate a comprehensive Mizāj-based diagnostic profile for patients of Amrāze Niswān wa Qabālat, and critically evaluate its implications for individualized treatment planning	3	Experiential-Learning6.1	CE	Does	CBL,D-BED,PAL,RLE,RP
CO1,CO2	Conduct research based on Unani fundamental principles in Amrāz e Niswān wa Qabālat.	3	Experiential-Learning6.2	CAP	Knows-how	PrBL,TPW
CO1,CO2	Analyze the clinical impact of akhlat in Amraze Niswan	3	Experiential-Learning6.3	CAN	Does	CD,D-BED,IBL

Unit 2 کلیاتِ امراض نسواں و قبالہ اور اس کے اسباب، اغراض واقسام Kulliyāt Amraze Niswan wa Qabalat wa Asbāb-o-Aghrāz wa Aqsaam

6.2.1 Types of waram in Amrād-i Niswān (Amrād zahirah wa batina, Amrād asliya wa shirkiya, Amrād Muzminā wa hāddā)

6.2.2 Nabd, Bawl wa Baraz

References: 1,2,3,4,9,18,19,20,21,26,27

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Describe various types of waram in Amrāze Niswān (Amrād zahirah wa batina)	1	Lecture	CC	Knows-how	FC,L
CO1,CO2	Discuss various types of waram in Amrāze Niswān (Amrād asliya wa shirkiya)	1	Lecture	CC	Knows-how	BS,DIS,FC
CO1,CO2	Describe and discuss types of waram in Amrāze Niswān (Amrād Muzminā wa hāddā)	1	Lecture	CC	Knows-how	DIS,FC,L_VC,RLE
CO1,CO2	Identify the significance of Nabz in Amrāze Niswān wa Qabālat.	3	Practical6.4	PSY-GUD	Shows-how	CBL,D-BED,RLE
CO1,CO2	Design and justify a clinical approach to evaluating Bawl wa Baraz in patients of Amrāze Niswān wa Qabālat, incorporating its diagnostic and therapeutic relevance.	3	Practical6.5	PSY-GUD	Shows-how	BS,D-BED,DIS
CO1,CO2	Demonstrate the various types of Nabd in Amrāze Niswān wa Qabālat.	2	Experiential-Learning6.4	PSY-MEC	Does	D-BED,RLE,RP,SIM
CO1,CO2	Interpret Primary diagnostic tools like Bawl wa Baraz in Amrāze Niswān wa Qabālat.	2	Experiential-Learning6.5	PSY-MEC	Does	D-BED,LRI,RLE

CO1,CO2	Conduct research in interpreting Nabd, Bawl wa Baraz in Amrāze Niswān wa Qabālat.	4	Experiential-Learning6.6	PSY-MEC	Does	JC,LS,PL,PER

Unit 3 زنانہ اعضاء تناسلیہ کی صحت میں اسباب ستہ ضروریہ وغیر ضروریہ کی اہمیت Asbāb Sitta Zaruriyya wa ghair Zaruriyya in female reproductive health

6.3.1 Asbāb Sitta Zaruriyya wa ghair Zaruriyya in the context of female reproductive health

References: 1,2,3,4,9,18,19,20,21,26,27,28,34,35

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Describe the Asbāb Sitta Zaruriyya in the context of female reproductive health	2	Lecture	CC	Knows-how	BS,DIS,FC,L
CO1,CO2	Discuss the concept of Asbāb Sitta ghair Zaruriyya in Amraze Niswan wa Qabalat	2	Lecture	CC	Knows-how	BS,DIS,L&GD
CO1,CO2	Integrate a holistic approach to female reproductive health by applying the principles of Asbāb-e-Sitta Zarooriya in clinical practice.	4	Practical6.6	PSY-GUD	Shows-how	CD,CBL,L&GD,PL,SY
CO1,CO2	Demonstrate the concept of Asbāb Sitta Zaruriyya wa ghair Zaruriyya in female health	4	Practical6.7	PSY-GUD	Shows-how	DIS,JC,PAL,TUT
CO1,CO2	Develop Interventions Based on Asbāb Sitta Zaruriyya in Amraze Niswan wa Qabalat	3	Experiential-Learning6.7	PSY-MEC	Does	CBL,PER,RP,SIM
CO1,CO2	Develop a comprehensive, multidisciplinary care plan that addresses all aspects of the Asbāb Sitta Zaruriyya	3	Experiential-Learning6.8	PSY-MEC	Does	PAL,TPW
CO1,CO2	Analyze and evaluate the correlation between Asbāb Sitta Zarūriyya and recent research on female reproductive health.	3	Experiential-Learning6.9	CAN	Knows-how	DIS,JC,LS,PL

Practical Training Activity

Practical 6.1 : Clinical Mizāj Evaluation

Total Learning hours: 2 Hours

1. Session Introduction and Learning Goals (10 minutes)
Teacher gives a short introduction about the session.
Explains the significance of Mizāj (temperament) assessment and its relevance in Qabālat (Obstetrics) with interactive talk with students, setting expectations.

2. Demonstration by Teacher (30 minutes)

Teacher performs live Mizāj assessment on selected ANC patients from OPD/IPD.
Explains each step, signs, and symptoms observed during the assessment. Correlates the findings with classical Unani concepts of different types of Mizāj through Bedside teaching with real patient demonstration and explanation.

3. Practical Hands-On by Students (60 minutes)
Students individually or in small groups, students perform Mizāj assessment on different patients under teacher's supervision. Try to match clinical findings with the theoretical types of Mizāj studied in classical texts and the teacher will supervises, guides, and provides feedback during students' assessments.

4. Wrap-Up and Reflection (20 minutes)
Teacher & Students: Discuss the findings and challenges faced during the practice.
Clarify any doubts and re-emphasize the link between clinical signs and classical Mizāj types.
through group discussion, Q&A, reflective feedback session.

Practical 6.2 : Temperament analysis in Amraze Niswan

Total learning hours: 2 Hours

1. Interactive discussion (10 minutes)
Teacher will begin with a short briefing about the objective of the session. The importance of Mizāj in diagnosis and treatment of gynecological will be explained.

2.Case-based learning using patient examples, discussion with visual aids or charts. (20 minutes)
Teacher will explain how different Mizāj are linked with specific conditions such as su'-i mizāj al-rahm, uqrat al-rahm, iḥtiqān al-dam, or su'-i mizāj related to ḥayḍ. Examples from classical texts will be correlated with real clinical signs and symptoms.

3. Bedside teaching with real patients OR teacher-led clinical demonstration. (30 minutes)
Teacher will demonstrate Mizāj assessment on selected patients from OPD/IPD. The step-by-step method of observation, questioning, and analysis based on physical, mental, and behavioral attributes will be shown. Correlation with classical descriptions will be emphasized.

4. Students' Hands-on Practice (45 minutes)
Students will be divided into small groups. Each group will assess at least one patient's Mizāj using the techniques demonstrated with teacher supervision. They will record their findings, identify the type of Mizāj, and link it with the disease condition.

5. Discussion and Wrap-up OR question-answer session, (15 minutes)
Teacher will guide an open discussion where each group will present their case findings. Differences and similarities in observations will be discussed. Teacher will clarify doubts and highlight key points.

Practical 6.3 : Mizaj-Based Patient Assessment

Total learning hours (2 hours)

1. Introduction by Teacher (15 minutes):

The session will begin with a short interactive lecture where the teacher introduces the concept of Mizāj, its classification, and its clinical relevance in Amrāz e Niswān. The difference between Mizāj-e-Tabi'ee and Mizāj-e-Marzī will be explained with examples. Common conditions such as Leucorrhea, Menorrhagia, Amenorrhea, and Dysmenorrhea will be discussed along with their associated Mizāj. This foundational knowledge will help students engage meaningfully with the upcoming case-based learning.

2. Case-Based Group Learning (45 minutes):

Students will be divided into four groups. Each group will receive a unique clinical case representing a specific gynecological disorder. They will analyze the signs and symptoms in the case to determine the Mizāj-e-Marzī, compare it with the patient's Mizāj-e-Tabi'ee, and discuss the implications for diagnosis and treatment. Each group will then prepare a brief presentation summarizing their case, the identified Mizāj, and an outline of Unani management based on Ilāj bil Mizāj. This activity will enhance clinical reasoning and group collaboration.

3. Peer-Based Mixed Group Discussion (30 minutes):

After group presentations, students will be reshuffled into mixed groups, ensuring that each new group has members from all four original groups. In these new groups, each student will share the case they previously discussed. This peer-based exchange will allow students to compare different Mizāj patterns across cases, discuss differential diagnosis, and reflect on how similar symptoms can arise from varying temperaments. The goal is to reinforce the clinical importance of accurate Mizāj assessment and personalized treatment strategies in Unani practice.

4. Faculty Wrap-Up and Clarification (30 minutes):

The teacher will guide a final reflection session, summarizing the key learning points. Emphasis will be placed on understanding Mizāj as a cornerstone of Unani diagnosis and its influence on treatment choices. Misconceptions or errors identified during group work will be corrected, and the discussion will be extended to how Mizāj connects with other Unani therapies like Ilāj bil Ghiza, Ilāj bil Dawa, and Ilāj bil Tadbeer. A short Q&A session will allow students to clear any doubts and consolidate their understanding.

5. Reflective Feedback and Assessment (Optional):

To close the session, students will be asked to write a brief reflection on the importance of Mizāj in the clinical case they studied. Optionally, a quick verbal quiz or set of oral questions may be conducted to reinforce concepts. Peer feedback may also be encouraged to promote accountability and active participation.

Practical 6.4 : Assessment of Nabd

Total Learning hours: 3 Hours

1.Interactive talk and question-answer session to activate prior knowledge. (15 minutes)
Teacher will introduce the concept of Nabz (pulse) in Unani medicine and its clinical relevance. The objective of the session will be explained, focusing on how pulse examination aids in diagnosing conditions related to women's health.

2. Case-based Learning (30 minutes)
Teacher will explain the types of Nabz and their relation with different Mizāj and Amrāz-e-Niswān like su'-i mizāj al-rahim. The classical signs of pulse in pregnancy, menstrual disorders, and other gynecological conditions will be discussed

3. Demonstration of Pulse Examination (45 minutes)

Teacher will demonstrate how to examine Nabz correctly in female patients, focusing on rhythm, strength, rate, and temperature. Correlation of pulse findings with specific diseases in Niswān wa Qabālat will be shown.

4. Small group practical activity with hands-on training (60 minutes)
Students will be divided into small groups. Each group will examine the Nabz of different female patients under supervision. They will document their observations and try to interpret the pulse in light of the patient's symptoms and history.

5. Case-based discussion / peer learning / reflective feedback. (20 minutes)
Each group will present one patient case, explaining their pulse findings and clinical impressions. The teacher will moderate and guide the discussion, pointing out areas of improvement and validating correct interpretations.

6. Wrap-Up and Key Takeaways (10 minutes)
Teacher will summarize the key learning points from the session, clarify any remaining doubts, and emphasize the role of Nabz in holistic diagnosis and treatment in Unani system through Group reflection, recap discussion.

Practical 6.5 : Assessment of Bawl wa Baraz

Total learning hours (3 hours)

1.Brainstorming Session (15 minutes)
Teacher will introduce the topic and explain the role of Bawl (urine) and Baraz (stool) in diagnosing diseases related to women's health. Importance of these excretions as indicators of internal mizāj and pathologies will be highlighted.

2. Symposium (30 minutes)
Teacher will explain classical Unani views on the appearance, consistency, color, frequency, and other features of Bawl wa Baraz and correlate with conditions such as saqṭ, su'-i mizāj al-rahm, and digestive issues in pregnancy will be discussed.

3. Demonstration of Clinical Observation and case interpretation. (45 minutes)
Teacher will demonstrate how to take proper history related to Bawl wa Baraz in gynecological and obstetric patients.
How to observe changes in excretions and correlate them with disease conditions will be shown.

4. Case-based Learning (60 minutes)
Students will be divided into small groups and assigned patients.
They will perform clinical history taking focusing on Bawl wa Baraz, record findings, and attempt to correlate symptoms with disease and mizāj.

5. Case Presentation and Group Discussion (20 minutes)
Each group will present one case including findings related to Bawl wa Baraz and their clinical interpretations.
Teacher will moderate the discussion, validate findings, and provide feedback.

6. Conclusion and discussion (10 minutes)
Teacher will summarize key learning points, reinforce the diagnostic importance of Bawl wa Baraz in Amrāz-e-Niswān, and clarify any doubts.

Practical 6.6 : Asbāb-e-Sitta Zarooriya in Amraze Niswan

Total learning hours (4 hours)

1. Discussion and Objective Orientation (15 minutes)
Teacher will briefly introduce the session and explain the importance of Asbāb-e-Sitta Zarooriya in maintaining reproductive health in women.

2. Symposium (45 minutes)
Teacher will explain all six essential causes:
1. Hawa (Air)
2. Makool wa Mashroob (Food and Drink)

3. Harkat wa Sukoon-e-Badani (Physical Movement and Rest)
4. Harkat wa Sukoon-e-Nafsani (Mental Movement and Emotional Balance)
5. Naum wa Yaqzah (Sleep and Wakefulness)
6. Iḥtibās wa Istifrāgh (Retention and Evacuation)
Each will be explained with examples from women's health and classical references.

3. Group discussion: Case Scenario Analysis (60 minutes)
Students will be divided into small groups and given different case scenarios related to menstrual disorders, infertility, pregnancy care, or general gynecological issues. Each group will identify how the imbalance of one or more Asbāb-e-Sitta may have contributed to the condition

4. Case- based learning (60 minutes)
Students will visit OPD/IPD under teacher supervision. They will observe at least two patients and assess their condition in light of the Asbāb-e-Sitta Zarooriya.
They will interact with the patients (where possible) and document lifestyle-related observations.

5. Peer learning and Discussion (40 minutes)
Each group will present their findings from the case study and clinical observations. They will explain how correction of Asbāb-e-Sitta could help in prevention and management of the condition.
Teacher will facilitate and provide feedback on each presentation.

6. Feedback and Takeaway Discussion (20 minutes)

Teacher will summarize the key points discussed during the session. Students will be encouraged to share their reflections and understanding of applying Asbāb-e-Sitta in promoting women's health.

Practical 6.7 : Asbāb-Based Clinical Evaluation

Total learning hours(4 hours)

1.**Demonstration** / **Discussion** (**20 minutes**)
Teacher introduces the concept of Asbāb Sitta Zaruriyya (six essential factors) and ghair Zaruriyya (non-essential factors) as they relate to female health. The teacher explains the historical and clinical relevance of these factors in the context of gynecological conditions and sets the objectives for the session.
2. **Visual Presentation** (**40 minutes**)
Teacher explains in detail each of the six essential factors—such as air, water, food, sleep, physical activity, and mental repose—and contrasts them with non-essential factors. Real-life examples and diagrams are used to illustrate how these factors influence female health. Students will understand the definitions, classifications, and impacts of both essential and non-essential factors on health.

3. Clinical Demonstration / Simulation / Role Play (40 minutes)
Teacher demonstrates the application of the theory in a clinical setting using a simulated patient case. The teacher shows how to assess a patient's lifestyle and

environmental factors and correlates these with specific health conditions in women.
Students observe the practical integration of theory into clinical practice and note the systematic approach to patient assessment.

4. Peer-assisted learning (**80 minutes**)
Students are divided into small groups and given different case scenarios that illustrate various clinical presentations in female health. Each group reviews the case, identifies relevant Asbāb Sitta Zaruriyya factors, and discusses potential influences of non-essential factors.
Teacher's Role: Circulate among groups to guide discussions, clarify doubts, and provide immediate feedback.
Students gain practical experience in analyzing and applying theoretical concepts to real-life cases. They learn to critically evaluate patient histories and environmental factors affecting health.
5. Group Presentations / Peer Discussion (40 minutes)
Each group presents their case analysis and the conclusions they have drawn regarding the influence of essential and non-essential factors on the patient's condition.
Teacher's Role: Facilitate the discussion, ask probing questions, and highlight key learning points from each presentation.
Students consolidate their learning through explanation and debate, and learn from their peers' approaches.
6. Reflective Session and Wrap-Up (**20 minutes**)
Teacher leads a reflective discussion on the session, summarizing the main points and reinforcing the importance of considering both essential and non-essential factors in female health. The session concludes with a review of key takeaways and suggestions for further reading or practice.
Students leave with a clear understanding of how to incorporate the concept into clinical practice and recognize its importance in comprehensive patient care.

Experiential learning Activity

Experiential-Learning 6.1 : Mizāj-based diagnostic profile

Total activity hours(3 hours)

1. Case-Based Learning (60 minutes):
Students will be divided into small groups and provided with clinical cases of conditions like amenorrhea, dysmenorrhea, menorrhagia, leucorrhea, or habitual abortion. Each group will analyze patient symptoms, physical signs, and lifestyle to assess the Mizāj (Sāda or Maddi) using classical Unani criteria.

2. Case Diagnosis and Mizāj Evaluation (60 minutes):
Groups will diagnose the case and identify the dominant Mizāj contributing to the pathology (e.g., warm/dry in menorrhagia, cold/wet in amenorrhea). They will correlate it with disease progression and suggest Unani management based on Mizāj modification.

3. Group Discussion and Reflection (60 minutes):
Each group will present their diagnosis and Mizāj assessment, followed by a faculty-moderated discussion. Students will reflect on the accuracy of their temperament evaluation, share clinical insights, and discuss how Mizāj-based understanding enhances diagnosis and treatment planning in gynecological practice.

Experiential-Learning 6.2 : Protocol related to Umoor e Tabiya in Amraze Niswan

Total activity hours(3 hours)

1. Project-Based Learning (60 minutes):
Students will be divided into teams and assigned specific topics rooted in Unani fundamentals (e.g., role of Mizāj in pregnancy, Akhlāt in menstrual disorders, Asbāb Sitta in infertility). Each group will develop a mini-research proposal, outlining objectives, classical references, and relevance to modern clinical observations.

2. Team-Based Analysis and Preparation (45 minutes):
Groups will collaborate to review classical texts and relevant research articles. They will critically analyze their topic, formulate a hypothesis or observation, and prepare visual aids (charts/posters) for presentation.

3. Group Presentations (45 minutes):
Each team will present their findings, highlighting the integration of Unani principles with clinical examples from Amrāz e Niswān wa Qabālat. Presentations will focus on clarity, originality, and clinical relevance.

4. Guided Discussion and Feedback (30 minutes):
A structured discussion will follow, facilitated by faculty, encouraging peer questions and feedback. The session will close with key insights on how Unani fundamentals guide clinical practice and research in women's health.

Experiential-Learning 6.3 : Clinical impact of Akhlat in Amraze Niswan

Total activity hours(3 hours)

1. Case-Based Learning (60 minutes):
Students will be provided with different clinical scenarios (e.g., leucorrhea, menorrhagia, amenorrhea, habitual abortion). Each group will identify the dominant khilt involved (Dam, Balgham, Safrā, Sawdā), analyze its effect on the condition, and relate it to mizāj, symptoms, and disease progression.

2. Case Diagnosis and Clinical Correlation (45 minutes):
Groups will present their diagnosis, highlighting how the imbalance of specific Akhlāt contributed to the pathology. They will discuss Unani therapeutic strategies to restore balance using Ilāj bil Ghiza, Dawa, and Tadbeer.

3. Bedside Demonstration (45 minutes):
Faculty will demonstrate how to assess signs of Akhlāt dominance or imbalance during clinical examination (e.g., skin tone, pulse, discharge characteristics, temperament cues) in real or simulated patients. Students will observe and learn how to apply humoral understanding at the bedside.

4. Real-Life Reflection and Discussion (30 minutes):
Students will share observations from previous clinical postings where humoral theory supported diagnosis or treatment decisions in Amrāz-e-Niswān. Faculty will summarize key patterns and reinforce the relevance of Akhlāt in reproductive health management.

Experiential-Learning 6.4 : Types of Nabd in Amrāze Niswān wa Qabālat.

Total activity hours(2 hours)

1. Case-Based Learning (30 minutes):
Students will be provided with clinical scenarios (e.g., pregnancy with hypertension, amenorrhea, uterine inflammation). Each group will identify the type of Nabd described (e.g., harek, lateef, ameeq, qawi, da'eef) and relate it to the underlying mizāj and reproductive pathology.

2. Case Diagnosis and Interpretation (30 minutes):
Groups will discuss how pulse characteristics aid in diagnosing female reproductive disorders. They will match Nabz types to conditions like menorrhagia, leucorrhea, habitual abortion, or hormonal imbalances, and suggest Unani management accordingly.

3. Bedside Demonstration (30 minutes):
The student will perform a live or simulated demonstration of Nabd assessment in female patients. Students will observe and learn pulse reading techniques, interpretation based on temperament, and clinical reasoning in Unani practice.

4. Real-Life Clinical Reflection (30 minutes):
Students will reflect on pulse findings from previous ward rounds or OPD experiences. They will share how Nabz helped in forming a diagnosis or assessing disease severity in Amrāz e Niswān. Faculty will conclude with key takeaways and reinforce the relevance of Nabz in gynecological care.

Experiential-Learning 6.5 : Interpretation of the diagnostic tools

Total activity hours (2 hours)

1. Lab Report Interpretation (30 minutes):
Students will analyze real or simulated **urine and stool lab reports** from gynecological cases (e.g., urinary tract infection, PID, constipation in pregnancy). They will correlate findings with classical Unani parameters (color, smell, consistency, etc.).

2. Case-Based Learning (30 minutes):
Groups will be given short clinical cases involving symptoms like burning micturition, foul-smelling vaginal discharge, or chronic constipation. They will diagnose the case using Unani interpretation of Bawl and Barāz, suggest further assessment, and propose a management plan.

3. Bedside Demonstration (30 minutes):
In a clinical or simulation setting, the facilitator will demonstrate how to examine and interpret Bawl and Barāz observations in real-time. Focus will be on traditional signs (e.g., foam, sediment, color) and their meanings in reproductive health disorders.

4. Case Diagnosis and Discussion (30 minutes):
Each group will present their diagnosis and interpretation, justifying it using both lab findings and classical Unani principles. Peer questions and faculty feedback will promote deeper clinical understanding.

Experiential-Learning 6.6 : Nabd, Bawl wa Baraz in Amrāze Niswān wa Qabālat.

Total activity hours(4 hours)

1. Library Session (60 minutes):
Students will explore classical Unani texts (e.g., Kāmil al-Sanā'ah, Al-Qānūn, Zakhīrah) to extract information about the diagnostic role of Nabz (pulse), Bawl (urine), and Barāz (stool) in women's health conditions such as pregnancy complications, amenorrhea, and leucorrhea. Each group will document traditional parameters and interpretations.

2. Journal Club (90 minutes):
Groups will review modern and Unani-based research articles related to urine analysis, stool patterns, and pulse variations in female reproductive disorders (e.g., PCOS, infections, gastrointestinal issues in pregnancy). They will discuss how traditional signs compare to biomedical findings and prepare a short summary presentation.

3. Peer Learning and Integration (45 minutes):
Groups will share their findings with peers, compare interpretations, and engage in guided discussion on how Nabz, Bawl, and Barāz can still offer valuable diagnostic clues in integrated clinical practice. Emphasis will be placed on critical thinking and clinical correlation.

4. Collaborative Reflection and Reporting (45 minutes):
Each group will develop a concise report or poster summarizing their classical and modern findings. Presentations will be followed by reflective feedback on how to utilize this diagnostic knowledge in Amrāze Niswān wa Qabālat practice.

Experiential-Learning 6.7 : Interventions Based on Asbāb Sitta Zaruriyya

Total activity hours(3 hours)

1. Case-Based Learning (60 minutes):
Students will be divided into small groups and given clinical cases (e.g., PCOS, dysmenorrhea, habitual abortion). They will analyze the case, identify imbalances in Asbāb Sitta Zaruriyya, and develop Unani-based intervention plans including diet, medicine, regimental therapy, and lifestyle modifications.

2. Simulation Activity (45 minutes):
Students will role-play clinical scenarios to practice delivering interventions based on their case analysis. This includes patient counseling, history taking, and planning treatment using Unani principles. Faculty will provide feedback on communication and clinical reasoning.

3. Group Discussion (45 minutes):
Each group will share insights from their simulation and discuss which Asbāb had the most impact in their case. The discussion will focus on the relevance of Unani interventions and their integration with current healthcare practices.

4. Reflection and Summary (30 minutes):
The session concludes with a brief reflection on applying Asbāb Sitta-based interventions in real-life practice. Students will submit a short summary of their learning and how they plan to use it clinically.

Experiential-Learning 6.8 : Holistic Care Plan for Female Reproductive Health

Total activity hours(3 hours)

1. Case-Based Planning – (60 minutes):

Students will be divided into small groups and given a clinical case (e.g., a 28-year-old woman with PCOS or secondary amenorrhea). Each group will identify the patient's lifestyle, psychosocial background, and clinical findings, then analyze imbalances in Asbāb Sitta Zarūriyya (Air, Food & Drink, Movement/Rest, Emotions, Sleep, and Excretion). Based on their analysis, they will formulate a comprehensive care plan including:

Ilāj bil Ghiza (Dietary regimen)

Ilāj bil Dawa (Unani medicines)

Ilāj bil Tadbeer (Regimental therapy)

Behavioral, emotional, and social health strategies

Referral to specialists (e.g., counselor, physiotherapist, dietician)

2. Field Visit / Interaction – (45 minutes):

Students will visit or interact (physically or virtually) with a reproductive health clinic, community health center, or counseling facility to observe multidisciplinary care approaches. They will note how various professionals (Unani, Allopathic, Psychological, Nutritional) manage female reproductive issues through lifestyle counseling, stress management, exercise, and diet—all aligning with Asbāb Sitta. Students will compare practical approaches with Unani philosophy.

3. Peer Group Presentations – (45 minutes):

Each group will present their integrated care plan based on the case and field insights. They will highlight how each Asbāb was addressed and justify their plan through both Unani and modern health models. Emphasis will be on teamwork, problem-solving, and bridging classical and modern systems. Presentations will be followed by peer feedback and faculty comments.

4. Conclusion and Reflection – (30 minutes):

The session will close with a faculty-led reflection, summarizing how Asbāb Sitta Zarūriyya can guide holistic, patient-centered, and multidisciplinary care. Students will be asked to reflect briefly (verbally or in writing) on how this approach can improve practice and patient outcomes in gynecological care.

Experiential-Learning 6.9 : Review on Asbāb Sitta Zaruriyya with recent scientific updates.

Total activity hours(3 hours)

1. Library Exploration – (45 minutes):
Students will explore classical Unani texts (e.g., Al-Qānūn, Kāmil al-Sanā'ah) to study references on Asbāb Sitta Zarūriyya in relation to female reproductive health. Each group will focus on one factor and identify how it impacts conditions like menstrual irregularities, infertility, or hormonal imbalances, as per Unani literature.

2. Journal Club –(60 minutes):
In small groups, students will review selected research articles on reproductive health issues (e.g., PCOS, stress, sleep disorders). They will analyze the findings and relate them to the respective Asbāb, identifying similarities or contrasts between modern evidence and classical understanding.

3. Peer Discussion – (45 minutes):
All groups will participate in a guided discussion to compare their insights. Students will reflect on how modern findings validate or challenge Unani views and how lifestyle-based prevention in Unani aligns with current reproductive health strategies.

4. Collaborative Summary – (30 minutes):
Each group will prepare a visual summary (poster/chart) linking one Asbāb to both classical insights and modern research. Presentations will be followed by a faculty wrap-up highlighting the continued relevance of Asbāb Sitta in integrated reproductive care.

Modular Assessment

Assessment method	**Hour**
Instructions - Conduct a structured Modular assessment. Assessment will be for 50 marks . Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. 1.Journal Club Presentation – 25 Marks	4

Content Mastery (10 Marks) Integration of Umūr-e-Tabī‘iyya with reproductive health. Use of classical Unani and contemporary references. Critical Analysis (5 Marks) Strengths, weaknesses, and relevance of the journal article. Application (5 Marks) Clinical correlation with conditions like infertility, Ihtibās-e-Tamth. Presentation Skills (5 Marks) Clarity, organization, and audience engagement. 2. Assignment – 25 Marks Content Relevance (10 Marks) Explanation of Asbāb Sitta Zaruriyya (e.g., Hawa, Ghiza) and Ghair Zaruriyya (e.g., emotional factors) in reproductive health. Critical Analysis (5 Marks) Analysis of their role in conditions like infertility, dysmenorrhea, etc. Application (5 Marks) Practical strategies for prevention and management based on Asbāb. Presentation & Organization (5 Marks)	

Clear structure, logical flow, and proper referencing. OR Any practical in converted form can be taken for assessment. (25 marks) and Any of the experimental as portfolio/ OSCEs/ OSPE/ Practical case presentation can be taken as assessment. (25 Marks) (Total 50 marks)	

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 7 : Cytology and Histopathology in Amrāze Niswān wa Qabālat امراض نسواں و قبالہ میں مستعمل خلوی و نسیجی تشریح						
Module Learning Objectives **(At the end of the module, the students should be able to)** 1. Evaluate the role of cytology and histology in clinical decision-making for gynecological cancer screening and diagnosis. 2. Describe the principles and procedures of Pap smears, LBC, FNAC, and endometrial sampling 3. Analyze cytological specimens and correlate findings. 4. Interpret histological findings related to female reproductive health and disease. 5. Identify the variations in cellular morphology across different stages of the menstrual cycle, pregnancy, and menopause. 6. Acquire the knowledge of recent advances in cytology & histopathology in amraze niswan wa qabalat						
Unit 1 Cytology in Amrāze Niswān wa Qabālat امراض نسواں و قبالہ میں مستعمل خلوی تشریح 7.1.1 Key concepts 7.1.2 Techniques types 7.1.3 Clinical correlations **References:** 1,2,3,4,12,19,31,46,48,49						
3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO6,CO7	Discuss key concepts of cytology and its clinical significance in Amraze Niswan	1	Lecture	CC	Knows-how	DIS,L&PPT
CO1,CO2,CO6,CO7	Describe the types of cytological techniques along with their clinical indications and the interpretation of normal and abnormal findings.	2	Lecture	CC	Knows-how	L&GD,L_VC

CO1,CO2,CO6,CO7	Describe the principles and procedures of cytological sampling methods such as Pap smears, fine needle aspiration cytology (FNAC), and endometrial sampling	2	Lecture	CC	Knows-how	L&PPT ,L_VC,ML
CO1,CO2,CO6,CO7	Demonstrate knowledge and practical skills in exfoliative cytology, including proper techniques for cervical and vaginal sample collection, preparation, and staining (e.g., Pap smear), with emphasis on both conventional and liquid-based cytology methods and their respective advantages.	5	Practical7.1	PSY-GUD	Shows-how	CD,CBL,D,DL,DIS
CO1,CO2,CO6,CO7	Conduct cytological examination techniques including slide preparation, microscopic evaluation, and interpretation to support diagnostic decision-making; differentiate between benign, inflammatory, premalignant, and malignant cytological changes; explain the role of cytology in cervical cancer screening; and classify epithelial cell abnormalities (e.g., ASC-US, LSIL, HSIL, AGC, SCC) according to the Bethesda System.	5	Practical7.2	PSY-GUD	Shows-how	D-BED,LRI,ML,RLE
CO1,CO2,CO6,CO7	Identify the normal and abnormal cellular structures (e.g., atypical squamous cells, dysplasia, malignancies)	2	Experiential-Learning7.1	PSY-MEC	Does	D-BED,SIM,W
CO1,CO2,CO6,CO7	Perform Pap smear, VIA &VILLI and in-depth analysis of clinical cases to enhance diagnostic reasoning and decision-making skills.	5	Experiential-Learning7.2	PSY-MEC	Does	CBL,D-BED,D-M,LRI,RLE,SIM,W
CO1,CO2,CO6,CO7	Demonstrate the application of cytology in clinical and diagnostic settings.	3	Experiential-Learning7.3	PSY-MEC	Does	CD,CBL,D,D-BED,PBL
CO1,CO2,CO6,CO7	Observe and interpret cytology and histopathology slides related to gyneacoloigcal diseases through lab sessions and case discussions.	3	Experiential-Learning7.4	PSY-ADT	Does	CBL,C_L,DIS,LRI,TBL
CO1,CO2,CO6,CO7	Recognise pathological changes in common gynaecological diseases through slides along with clinical data	5	Practical7.3	PSY-GUD	Shows-how	D-BED,DIS,TUT

Unit 2 امراض نسواں وقبالہ میں مستعمل سیتھی تشریح Histopathology in Amrāze Niswān wa Qabālat

7.2.1 Normal and abnormal histology of female reproductive organ,

7.2.2 Impact of histological techniques in the screening, diagnosis

References: 3,31,32,33,34,37,46,48,49

3A	3B	3C	3D	3E	3F	3G

CO1,CO2,CO6,CO7	Describe normal and abnormal histology of female reproductive organ,	1	Lecture	CC	Knows-how	DIS,L&GD,L&PPT
CO1,CO2,CO6,CO7	Discuss the Impact of histological techniques in the screening, diagnosis, and management of gynecological cancers, including cervical, endometrial, and ovarian cancers	2	Lecture	CC	Knows-how	L&GD,L&PPT ,SY,TUT
CO1,CO2,CO6,CO7	Evaluate the implications of histological findings in obstetric pathology, such as placental abnormalities and gestational trophoblastic diseases.	2	Lecture	CAN	Knows-how	L&PPT ,SY,TUT
CO1,CO2,CO6,CO7	Examine normal and abnormal placental histology and understand pregnany-related complications through microscopic examination of placental tissue.	5	Practical7.4	PSY-GUD	Shows-how	D,D-M,DIS,PER,SIM
CO1,CO2,CO6,CO7	Identify normal and abnormal histological samples and correlate with clinical conditions in gynaecology.	5	Experiential-Learning7.5	PSY-GUD	Does	CBL,D,DIS,PER,SIM
CO1,CO2,CO6,CO7	Demonstrate the ability to present and correlate clinical cases with histopathological findings, perform bedside evaluations integrating diagnostic data, present and interpret recent advances in histopathology, and integrate clinical, histological, and research insights through reflective discussion to enhance diagnostic and decision-making skills in gynecological practice.	4	Experiential-Learning7.6	PSY-MEC	Does	CBL,D-BED,PL,PER,SY
CO1,CO2,CO6,CO7	Review placental and fetal tissue samples from early and late-stage pregnancies, with emphasis on conditions like preeclampsia and IUGR, and integrate inputs from pathology and related specialties to apply a multidisciplinary approach in managing reproductive health.	4	Experiential-Learning7.7	PSY-MEC	Does	C_L,SY,TUT

Practical Training Activity

Practical 7.1 : Exfoliative cytology

Total learning hours (5 hours)

1. Case-Based Learning (1 hour):
The session begins with a brief introduction to the significance of exfoliative cytology in gynecological practice, especially in the early detection of cervical pathologies. The teacher will present three clinical cases involving symptoms like postcoital bleeding, abnormal vaginal discharge, and routine screening. Students, divided into small groups, will analyze each case to determine indications for Pap smear, expected cytological changes, and correlate findings with patient history and Unani perspectives. This activity will foster diagnostic reasoning and contextual understanding.

2. Demonstration of Sample Collection Techniques (45 minutes):
The teacher will perform a live demonstration using a pelvic model or simulation dummy to show both conventional Pap smear technique (using spatula and endocervical

brush) and liquid-based cytology (LBC) methods. Key steps such as patient preparation, correct positioning, specimen collection, slide preparation, fixation, and proper labeling will be highlighted. Advantages and disadvantages of each technique will also be explained to enhance clinical judgment.

3. Simulation-Based Practice (1 hour):
Under supervision, students will rotate through skill stations to practice the techniques demonstrated earlier. Working in pairs or small groups, they will use simulation models to perform cervical and vaginal sample collection. The teacher will observe and guide students, giving real-time feedback on handling instruments, smear spreading, fixation, and maintaining aseptic technique. This hands-on component is crucial for skill acquisition and confidence building.

4. Slide Preparation and Staining (1 hour):
The teacher will walk the students through the process of Pap staining, explaining each step including fixation, application of nuclear and cytoplasmic stains, washing, and dehydration. Students will prepare and stain their own slides using both conventional and liquid-based samples. Afterward, they will observe differences in cellular clarity and smear quality between the two methods. This reinforces the importance of technique in diagnostic accuracy.

5. Cytological Interpretation and Group Discussion (1 hour):
Students will examine pre-prepared stained slides showing various cytological patterns—normal, inflammatory, ASCUS, LSIL, and HSIL. In small groups, they will interpret findings and match them with corresponding clinical cases. The teacher will moderate a discussion focusing on how to report findings, recommend further management, and communicate results to patients. Emphasis will be placed on correlating cytological findings with real-life clinical decision-making.

6. Summary and Reflection (15 minutes):
The session concludes with a brief recap of the techniques, indications, and interpretation methods taught. Students will complete a short quiz or reflective note on the practical skills learned. The teacher will summarize the clinical significance of exfoliative cytology and provide key takeaways for its use in Amrāz e Niswān wa Qabālat.

Practical 7.2 : Cytological examination techniques

Total learning hours(5 hours)

1. Case-Based Introduction and Clinical Correlation (60 minutes):
The session begins with a case-based discussion led by the teacher. Students are presented with clinical scenarios of patients with symptoms such as intermenstrual bleeding, postcoital spotting, and abnormal discharge. These cases prompt students to explore the indications for cytological evaluation, primarily Pap smear testing. The teacher explains how cytology contributes to the early detection of cervical cancer, its role in screening programs, and correlates the clinical presentation with cytological changes.

2. Demonstration of Cytological Techniques and Slide Preparation (60 minutes):
The teacher performs a step-by-step demonstration of Pap smear collection, smear preparation, fixation, and staining (both conventional and liquid-based cytology). Proper sample collection technique is emphasized using a pelvic model. Students are shown how to avoid errors like inadequate sampling or poor fixation, which may compromise slide interpretation. This segment sets the foundation for accurate cytological analysis.

3. Lab Report Interpretation and Microscopic Evaluation (60 minutes):
Students are provided with pre-prepared slides and real or mock lab reports showing different cytological patterns. In small groups, they examine these under the microscope or via digital slides, identifying benign, inflammatory, premalignant, and malignant features. Each group interprets the report and discusses how the cytological findings align with clinical signs and what management steps would follow.

4. Classification Based on the Bethesda System (60 minutes):
The teacher introduces the Bethesda System for reporting cervical cytology. Students classify epithelial abnormalities such as ASC-US (Atypical Squamous Cells of Undetermined Significance), LSIL (Low-Grade Squamous Intraepithelial Lesion), HSIL (High-Grade Squamous Intraepithelial Lesion), AGC (Atypical Glandular Cells), and SCC (Squamous Cell Carcinoma). Groups apply these classifications to the earlier lab cases and explain the significance of each category in terms of follow-up and treatment planning.

5. Group Presentation and Critical Reflection (60 minutes):
Each group presents a case, including the clinical background, cytological slide findings, classification as per Bethesda System, and proposed diagnosis. This is followed by peer discussion and feedback from the teacher. The session ends with a summary highlighting the importance of cytology in preventive gynecology and the accurate classification of epithelial abnormalities for timely intervention.

Practical 7.3 : Pathological changes in common gynaecological diseases.

Total learning hours (5 hours)

1. Clinical Orientation and Case-Based Introduction (60 minutes):
The session begins with a brief orientation by the teacher, introducing students to the clinical presentation of common gynecological conditions such as leiomyoma, endometrial hyperplasia, cervicitis, carcinoma cervix, adenomyosis, and endometriosis. A set of clinical vignettes is shared, and students are encouraged to predict potential histopathological findings based on symptoms such as abnormal uterine bleeding, pelvic pain, or postcoital spotting. This activity primes the learners to integrate clinical and pathological reasoning.

2. Demonstration of Histopathological Slides (60 minutes):
The teacher conducts a microscopic demonstration of pre-selected slides. Using a digital microscope or projection system, the teacher explains the key microscopic features—for example, whorled bundles in fibroids, crowded glands in hyperplasia, or koilocytosis in cervical dysplasia. Emphasis is placed on differentiating between benign and malignant patterns and understanding their clinical implications.

3. Simulation-Based Slide Interpretation (60 minutes):
In small groups, students are given unknown histopathology slides along with anonymized clinical data. They rotate through microscope stations or digital slide viewers, examining each slide and recording their observations. Each group prepares a brief histopathological report, highlighting tissue structure, cellular changes, and linking them to the clinical profile provided.

4. Group Work and Peer Learning (60 minutes):
Groups discuss their findings internally and prepare a mini case presentation. During this time, the teacher facilitates by providing guiding questions and prompts: What

features support your diagnosis? What differential diagnoses were considered? What further investigations or treatment might be suggested? This encourages deeper engagement and collaborative learning.

5. Presentations and Faculty Feedback (60 minutes):
Each group presents their case to the class, explaining their diagnostic approach and histopathological interpretation. The teacher provides structured feedback, correcting misconceptions, validating accurate observations, and reinforcing diagnostic criteria. A comparative summary is given at the end, linking all presented slides to clinical practice in Amrāze-Niswān.

Practical 7.4 : Placental histology and pregnancy-related complications.

Total learning hours(5 hours)

1. Simulation-Based Introduction (90 minutes):
The session begins with a simulation-based overview where students are introduced to the normal structure of the placenta using virtual or 3D anatomical models. The teacher explains the microscopic components—chorionic villi, syncytiotrophoblasts, cytotrophoblasts, and maternal blood spaces—along with their functions in fetal-maternal exchange. Simulated models help visualize placental development stages and prepare students for histological examination.

2. Microscopic Demonstration (90 minutes):
The teacher conducts a live demonstration of placental slides under the microscope, showing both normal histology and abnormal patterns seen in conditions such as preeclampsia, intrauterine growth restriction (IUGR), abruptio placentae, and infections. Emphasis is placed on identifying histopathological features like infarcts, calcifications, fibrinoid necrosis, and villous immaturity. Students are guided in comparing normal and pathological changes.

3. Guided Slide Examination (60 minutes):
Students are divided into small groups and provided with labeled and unlabeled histological slides of placental tissue. Using light microscopes or digital histology platforms, they will examine each slide, identify key structures, and note pathological changes. Each group will fill out a worksheet correlating microscopic findings with clinical scenarios like hypertension in pregnancy or fetal distress.

4. Presentation and Feedback (60 minutes):
Groups will present their cases to peers, highlighting histological features, diagnostic reasoning, and differential diagnoses. The teacher will provide corrective feedback, clarify doubts, and emphasize the clinical significance of recognizing pathological patterns early, particularly in screening and management of gynecological diseases.

Experiential learning Activity

Experiential-Learning 7.1 : Normal and abnormal cellular structures.

Total activity hours (2 hours)

1. Simulation-Based Microscopic Review (60 minutes):
The session begins with a focused simulation activity where students examine digital or microscope slides showing a range of cellular structures—from normal squamous cells to atypical squamous cells, low-grade and high-grade dysplasia, and malignant changes. The teacher guides students in recognizing key cytological features such as nuclear enlargement, hyperchromasia, irregular borders, and mitotic figures. Comparative analysis between normal and abnormal samples helps in pattern recognition.

2. Bedside Demonstration and Case Correlation (60 minutes):
Following the simulation, a bedside or chairside demonstration is conducted using clinical charts, cytology reports, or real-time patient records. The teacher correlates clinical presentations (e.g., postcoital bleeding, persistent discharge) with cytological findings. Students observe how cytology supports diagnosis and management planning, reinforcing the clinical relevance of identifying abnormal cellular structures.

Experiential-Learning 7.2 : Pap smear, VIA and VILLI

Total activity hours (5 hours)

1. Case-Based Clinical Introduction (60 minutes):
The session begins with case-based learning, where students are presented with clinical scenarios such as women with abnormal vaginal bleeding, chronic discharge, or high-risk sexual history. In groups, students assess the cases, identify indications for cervical screening procedures, and plan the diagnostic approach, initiating the link between clinical symptoms and appropriate screening methods.

2. Simulation and Demonstration of Procedures (90 minutes):
Students observe a step-by-step demonstration of Pap smear, VIA (Visual Inspection with Acetic Acid), and VILLI (Visual Inspection with Lugol's Iodine) using anatomical models or simulations. The teacher explains correct speculum insertion, sample collection, application of reagents, and interpretation of visual changes. Students then practice under supervision in simulation stations to gain hands-on experience and reinforce procedural skills.

3. Bedside Application and Clinical Diagnosis (60 minutes):
Where feasible, bedside demonstration is carried out using real patients or clinical charts. Students correlate their procedural knowledge with patient history, examination, and diagnostic planning, enhancing clinical decision-making. They interpret findings and assess risk levels, recommending follow-up or biopsy when indicated.

4. Student Presentations and Clinical Correlation (60 minutes):
Student groups present assigned or self-selected clinical cases that involve cervical screening. Each presentation includes patient background, findings from Pap smear/VIA/VILLI, cytological or histological results, and suggested management plan. This segment integrates diagnostic reasoning with evidence-based action.

5. Guided Discussion and Reflection (30 minutes):
The session concludes with a faculty-led discussion summarizing best practices in cervical cancer screening, common diagnostic challenges, and how procedural proficiency leads to early detection and improved outcomes. Students reflect on their clinical reasoning progress and receive feedback to reinforce their diagnostic approach.

Experiential-Learning 7.3 : Cytological application in gynaecological cases.

Total activity hours (3 hours)

1. Problem-Based Case Discussion (60 minutes):
The session begins with the teacher presenting clinical problems such as a patient with abnormal vaginal bleeding, postcoital spotting, or persistent discharge. Students work in small groups to assess the case, propose possible diagnoses, and identify when cytological investigations like Pap smear or exfoliative cytology are indicated. This activity encourages critical thinking and real-world clinical decision-making.

2. Case-Based Learning with Diagnostic Focus (45 minutes):
Next, students analyze actual or simulated cytology reports from patients with gynecological complaints. They review sample slides or digital images, interpret findings, and differentiate between benign, inflammatory, premalignant, and malignant cellular changes. Each group correlates the cytological findings with the clinical background and outlines the likely diagnosis and next steps.

3. Bedside Demonstration and Practical Integration (45 minutes):
The teacher conducts a bedside demonstration (using a model or real patient setting), showing the correct technique for sample collection in cytological procedures. This includes preparation, labeling, fixation, and transport. Students observe the practical steps involved and understand how proper technique impacts diagnostic accuracy and patient care.

4. Group Reflection and Summary Discussion (30 minutes):
To conclude, students engage in a reflective discussion on how cytology complements clinical evaluation, supports early detection of cervical pathology, and plays a role in screening and patient monitoring. The teacher wraps up with key points on integrating cytology into routine clinical diagnostics and emphasizes multidisciplinary collaboration for effective patient management.

Experiential-Learning 7.4 : Interpretation of cytology and histopathology realted to gynecological diseases

Total activity hours (3 hours)

1. Orientation and Briefing – 15 minutes

The instructor introduces the objectives, expected outcomes, and explains the workflow for the session. Students are divided into small groups.

2. Slide Observation (Lab Activity) – 60 minutes

Students rotate through lab stations where they observe pre-labeled cytology and histopathology slides (e.g., cervical intraepithelial neoplasia, endometrial hyperplasia, ovarian tumors). They use microscopes or digital slide viewers to examine key features. Each group is provided with a worksheet to record their observations.

3. Lab Report Interpretation – 45 minutes

Each group receives 2–3 anonymized pathology reports (PAP smear results, endometrial biopsy findings, etc.) with accompanying brief clinical histories. Students are tasked with interpreting the findings, correlating with the slides they've seen, and formulating a probable diagnosis.

.**4. Group Discussion & Case Correlation – 45 minutes**

Each group presents one case to the class, summarizing the histological findings and their interpretation. The instructor facilitates a guided discussion, linking pathological findings to patient management and Unani perspectives where applicable.

.**5. Wrap-up & Reflective Feedback – 15 minutes**

The teacher summarizes key learning points and invites students to reflect on the session—what they learned, what they found challenging, and how they can apply this knowledge clinically.

Experiential-Learning 7.5 : Normal and abnormal histoloigcal samples

Total activity hours (5 hours)

1. Case-Based Learning Introduction (60 minutes):
The session starts with a teacher-led discussion of clinical case scenarios involving gynecological conditions such as endometrial hyperplasia, chronic cervicitis, fibroids, carcinoma cervix, and adenomyosis. Students are guided to consider how histopathology assists in confirming diagnoses. Each case includes patient history, presenting complaints, and basic investigation findings to stimulate clinical reasoning and link it to expected histological outcomes.

2. Demonstration of Histological Slides (60 minutes):
The teacher demonstrates normal and abnormal histological slides using microscope or digital projection. Students are shown characteristic features such as glandular crowding in hyperplasia, cellular atypia in carcinoma, inflammatory infiltrates in cervicitis, or degenerative changes in fibroids. Emphasis is placed on differentiating normal physiological patterns from pathological alterations.

3. Simulation and Slide-Based Exercises (60 minutes):
Students engage in hands-on simulation, working with prepared slides or virtual histology platforms. In small groups, they examine and interpret histological images, attempting to match findings with provided clinical vignettes. This strengthens their ability to visually recognize pathology and connect it with patient symptoms and diagnosis.

4. Student Presentations (60 minutes):
Each group prepares a short presentation of a selected case, including their histopathological interpretation, differential diagnosis, and final correlation with clinical findings. Students explain how recognizing histological features influenced the diagnostic pathway. Peer groups and the teacher provide feedback to refine understanding.

5. Interactive Discussion and Recap (60 minutes):
The session concludes with a guided discussion where students compare normal vs. abnormal tissue patterns and discuss the significance of timely and accurate histological

interpretation in diagnosis, prognosis, and treatment planning. The teacher summarizes key visual clues, diagnostic principles, and the value of integrating histopathology into gynecological care.

Experiential-Learning 7.6 : Histo-Clinical Integration

Total activity hours (4 hours)

1. Case-Based Learning and Clinical Presentation (90 minutes):
The session begins with selected student groups presenting real or simulated clinical cases of common gynecological conditions such as endometriosis, fibroids, endometrial hyperplasia, and carcinoma cervix. Each presentation includes history, examination, clinical findings, and emphasis on histological reports. Students highlight how tissue diagnosis confirms or modifies clinical suspicion, and the role it plays in treatment decisions.

2. Bedside Demonstration and Clinical Correlation (60 minutes):
Following the case presentation, the teacher conducts a bedside demonstration using patient charts, diagnostic reports, and physical examination findings (or standardized patients). Students are encouraged to correlate clinical symptoms with histological outcomes, understand how findings are gathered in real time, and appreciate the role of bedside skills in forming a complete clinical picture.

3. Journal Club on Recent Advances (60 minutes):
Students participate in a journal club session, where they review and discuss recent research or clinical guidelines related to histopathological advances in gynecology, such as updates in molecular markers, immunohistochemistry, or newer biopsy techniques. Each student or group presents a summary of a selected paper, followed by a guided discussion on how these advances can influence diagnostic precision and patient care.

4. Synthesis and Reflective Discussion (30 minutes):
To conclude, students and faculty reflect on how histopathology bridges clinical signs and modern research, reinforcing the importance of interdisciplinary awareness. A brief Q&A session helps clarify doubts and highlight take-home messages from case presentations and literature review.

Experiential-Learning 7.7 : Multidisciplinary Placental Review

Total activity hours (4 hours)

1. Co-Learning Tutorial with Pathology Expert (60 minutes):
The session begins with a collaborative tutorial led by both a gynecology and pathology faculty member. Students review histopathological samples from early and late-stage pregnancies, focusing on conditions such as preeclampsia, intrauterine growth restriction (IUGR), and placental insufficiency. Key changes such as villous immaturity, infarcts, and decidual vasculopathy are discussed in correlation with maternal and fetal outcomes. Students are encouraged to ask questions and actively engage with both specialties for a comprehensive understanding.

2. Student Symposium on Multidisciplinary Management (90 minutes):
In this segment, students form small teams and prepare brief symposium-style presentations on different cases related to pregnancy complications. Each team presents the

clinical history, placental histology, and possible multidisciplinary management approaches, including Unani perspective, modern pathology, and obstetric care. Peer teams provide input and raise clinical questions, promoting an interactive exchange of ideas and holistic learning.

3. Case-Based Group Discussion and Reflection (60 minutes):
Using actual or simulated patient cases, students work in mixed-discipline groups to discuss diagnosis, investigations, and management. They integrate data from ultrasound, lab findings, and placental histology to draw conclusions. Faculty guide discussions, helping students identify red flags and interdepartmental coordination points for managing complex pregnancy conditions.

4. Summary Review and Skill Reinforcement (30 minutes):
The session ends with a group review summarizing key histopathological patterns, their clinical relevance, and how a multidisciplinary approach improves reproductive outcomes. Students reflect on what skills were gained, and how the integration of pathology with gynecology enhances diagnostic accuracy and patient care.

Modular Assessment

Assessment method	Hour
Instructions - Conduct a structured Modular assessment. Assessment will be for 50 marks . Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. 1. Long Answer Questions (LAQ) – 25 Marks Example Question: Describe the cytological features of cervical intraepithelial neoplasia (CIN) and its clinical significance. Content Depth (10 Marks) Detailed explanation of CIN stages (CIN I, II, III), cellular changes, and progression to cervical cancer. Clinical Correlation (5 Marks) Relation to Pap smear results and patient management (e.g., colposcopy, biopsy). Critical Analysis (5 Marks) Discussion on early detection and limitations of cytology in false-negative cases. Presentation & Structure (5 Marks) Well-organized answer with diagrams and references. 2. Short Answer Questions (SAQ) – 25 Marks Example Questions: List the cytological features of Trichomonas vaginalis infection in a Pap smear. (5 Marks) Briefly describe histopathological findings in endometrial hyperplasia. (5 Marks) Enumerate differences between serous and mucinous ovarian tumors based on histopathology. (5 Marks) Explain the significance of atypical squamous cells of undetermined significance (ASC-US) in cervical cytology. (5 Marks) Describe the histopathological findings in gestational trophoblastic disease (molar pregnancy). (5 Marks) OR	4

Any practical in converted form can be taken for assessment. (25 Marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as assessment (25 Marks) (Total 50 marks)	

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical/experiential) learning session, the students should be able to)	3C Notional Learning Hours	3D Lecture/ Practical/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/ Shows how/ Knows how/ Know)	3G Teaching Learning Methods
Module 8 : Clinical Microbiology, Applied Biochemistry and Applied Medical Genetics in Amrāze Niswān wa Qabālat امراض نسواں و قبالہ میں علم احیاء دقیقہ، کیمیاء حیاتی اور علم الجینیات کا بیان						
Module Learning Objectives **(At the end of the module, the students should be able to)** 1. Evaluate the impact of microbial imbalance (dysbiosis) in different compartments of the female reproductive tract on fertility and maternal-fetal health. 2. Distinguish common bacterial, viral, fungal, and parasitic pathogens that affect women, including those responsible for sexually transmitted infections and obstetric complications 3. Demonstrate knowledge of diagnostic methods of molecular biology techniques (PCR, sequencing) and microbiological assays in diagnosing infections and genetic disorders in Amraze Niswan wa Qabalat. 4. Describe clinical relevance of biochemical changes during pregnancy . 5. Analyze the genetic basis of chromosomal abnormalities and their implications in congenital and hereditary disorders. 6. Interpret results of prenatal diagnostic procedures and assess their clinical relevance in the management of fetal anomalies.						
Unit 1 Clinical microbiology applied to investigations for Amrāze Niswān wa Qabālat امراض نسواں و قبالہ میں سریریاتی و اطلاقی علم احیاء دقیقہ کا بیان 8.1.1 Basic applied microbiology 8.1.2 Laboratory diagnostics methods 8.1.3 Specimen collection techniques 8.1.4 Significance of microbiological findings **References:** 36,37,39,40,42						
3A	3B	3C	3D	3E	3F	3G

CO2,CO7	Describe basic Microbiological Concepts in Gynecology and Obstetrics.	1	Lecture	CC	Knows-how	BL,L&GD,L&PPT ,PER
CO2,CO7	Discuss the principles of laboratory diagnostics methods, specimen collection techniques, and the significance of microbiological findings in gynecology and obstetrics.	2	Lecture	CC	Knows-how	DIS,L&GD,L&PPT ,PER
CO2,CO7	Perform microbiological techniques for sample collection, culture, and identification	4	Practical8.1	PSY-GUD	Shows-how	D,DL,LRI,SIM,W
CO2,CO7	Analyze and interpret laboratory results, e.g., culture reports, sensitivity profiles, molecular diagnostics.	2	Practical8.2	CAN	Shows-how	CBL,D,DL,LRI,PT,PBL,RLE
CO2,CO7	Correlate microbiological data with clinical presentations in gynecology and obstetrics	1	Practical8.3	PSY-GUD	Shows-how	CBL,D-BED,DL,W
CO2,CO7	Practice aseptic techniques in clinical settings, particularly during labor and delivery, to prevent hospital-acquired infections.	2	Practical8.4	PSY-GUD	Shows-how	D-BED,PT,SIM
CO2,CO7	Engage in clinical rounds, focusing on cases with microbiologically linked gynaecological or obstetric infections; participate in the investigation of real-world or simulation cases under supervision.	4	Experiential-Learning8.1	PSY-MEC	Does	CBL,C_L,DIS,SIM
CO2,CO7	Demonstrate case studies involving infectious diseases in pregnancy to peers, integrating microbiological findings with clinical outcomes.	3	Experiential-Learning8.2	PSY-MEC	Does	CBL,DIS,JC,PL
CO2,CO7	Adapt and apply microbiological diagnostic techniques, including microscopic examination and antimicrobial sensitivity testing, to identify pathogens in infections related to Amrāze Niswān wa Qabālat and develop case-specific treatment strategies by integrating modern clinical microbiology with Unani medicine principles.	2	Experiential-Learning8.3	PSY-ADT	Does	CD,CBL,PER

Unit 2 (اطلاقی حیاتیاتی کیمیا (اعضاء تولید زنانہ کی صحت و مرض کی حیاتیاتی کیمیائی اساس) Applied Biochemistry (Biochemical basis of female reproductive health and diseases)

8.2.1 Biochemical markers and tests

8.2.2 Applied knowledge of genetic and molecular biochemistry

References: 1,31,38,40,41,43,46

3A	3B	3C	3D	3E	3F	3G

CO2,CO7	Discuss the biochemical markers and tests help in diagnosing a range of gynecological and obstetric conditions, from infertility and menstrual irregularities to pregnancy-related complications and fetal health monitoring	2	Lecture	CC	Knows-how	CBL,D,L&GD,L&PPT ,PER
CO2,CO7	Describe the applied knowledge of genetic and molecular biochemistry.	1	Lecture	CC	Knows-how	D,L&GD,L&PPT ,PER
CO2,CO7	Conduct practical session on assessing biochemical markers and interpretion test results used in obstetric and gynecological practice.	4	Practical8.5	PSY-GUD	Shows-how	CBL,D,DIS,LRI
CO2,CO7	Demonstrate the significance of the biochemical markers in prenatal screening and maternal and neonatal outcomes.	3	Practical8.6	PSY-GUD	Shows-how	CD,CBL,D,DIS,LRI
CO2,CO7	Organize and lead brainstorming sessions to map biochemical changes across pregnancy stages.	3	Experiential-Learning8.4	PSY-MEC	Does	BS,DIS,PAL,PER
CO2,CO7	Develop skills in biochemical analysis relevant to gynecological and obstetric conditions.	3	Experiential-Learning8.5	PSY-MEC	Does	CBL,D-BED,DIS,PL
CO2,CO7	Identify biochemical indicators of menopause, interpreting lipid profiles and bone health markers	3	Experiential-Learning8.6	PSY-MEC	Does	CBL,LRI,SDL

Unit 3 امراض نسواں وقبالہ سے متعلق اطلاقی طبی جینیات کا بیان applied Medical Genetics in Amrāze Niswān wa Qabālat

8.3.1Chromosomes

8.3.2 Mechanisms behind chromosomal abnormalities (numerical and structural)

8.3.3 Prenatal screening and diagnostic tests

8.3.3.1Chorionic villus sampling (CVS),

8.3.3.2 Amniocentesis

8.3.3.3 Non-invasive prenatal testing (NIPT).

8.3.4 Genetic implications in Amraz e niswan

References: 44,45,47,48,49

3A	3B	3C	3D	3E	3F	3G
CO2,CO7	Summarize the chromosomal structures and mechanisms of abnormalities, and relate them to reproductive health outcomes.	1	Lecture	CC	Knows-how	D-BED,L&GD,L&PPT ,SY,TUT
CO2,CO7	Discuss the clinical significance of prenatal screening and diagnostic tests, including chorionic villus sampling (CVS), amniocentesis, and non-invasive prenatal testing (NIPT).	1	Lecture	CC	Knows-how	D-BED,L&PPT ,SY,TUT
CO2,CO7	Describe the genetic and molecular basis of gynecological cancers (e.g., BRCA mutations in ovarian and breast cancer).	1	Lecture	CC	Knows-how	FC,L&PPT ,TUT
CO2,CO7	Discuss the genetic implications in infertility, polycystic ovary syndrome (PCOS), and recurrent miscarriages.	1	Lecture	CC	Knows-how	BS,DIS
CO2,CO7	Interpret common prenatal diagnostic tests like amniocentesis, CVS, and ultrasound markers for genetic conditions (e.g., nuchal translucency) and communicate genetic risks and prenatal diagnostic results	2	Practical8.7	PSY-GUD	Shows-how	CD,CBL,D,DIS,LRI,TUT
CO2,CO7	Interpret genetic testing reports, understanding the significance of different chromosomal abnormalities and gene mutations in the context of pregnancy outcomes and maternal health and correlate clinical findings with laboratory results to formulate a diagnosis.	2	Practical8.8	PSY-GUD	Shows-how	CD,CBL,DIS,LRI
CO2,CO7	Analyze complex case scenarios involving genetic determinants of reproductive health to assess and interpret genetic influences on prenatal screening, infertility, and hereditary gynecological cancer risks, and identify recent advances in medical genetics, such as CRISPR-based gene editing, relevant to clinical practice.	4	Experiential-Learning8.7	CAN	Does	CBL,D-BED,PER
CO2,CO7	Apply knowledge of genetic markers and cytogenetic techniques to interpret common chromosomal abnormalities such as Trisomy 21, 18, and 13 using tools like NIPT and ultrasound, and to evaluate cases of recurrent miscarriages, stillbirths, and congenital anomalies.	4	Experiential-Learning8.8	CAP	Does	CBL,D,DIS,SIM

Practical Training Activity

Practical 8.1 : Safety and laboratory Protocols, Collection and Handling of Specimens

Total learning hours (4)

1. Introduction and Demonstration of Sample Collection – 30 minutes

The session begins with a 30-minute introduction where the teacher explains the clinical significance of microbiological sampling in gynecology and obstetrics. This includes conditions like bacterial vaginosis, candidiasis, chorioamnionitis, pelvic inflammatory disease, and puerperal sepsis. A live or simulated demonstration is conducted showing how to properly collect high vaginal swabs, endocervical swabs, urine samples, and amniotic fluid samples using sterile techniques. Emphasis is placed on avoiding contamination and ensuring timely transport to the lab.

2. Laboratory Demonstration of Culture Techniques – 60 minutes

Over the next 60 minutes, the session shifts to the microbiology laboratory where students observe the inoculation of various clinical specimens onto selective and non-selective culture media such as blood agar, MacConkey agar, Sabouraud dextrose agar, and chocolate agar. The teacher demonstrates streaking techniques, incubation conditions, and identification of preliminary colony characteristics such as hemolysis, lactose fermentation, and fungal morphology. Students also learn the importance of proper labeling, media selection, and biosafety protocols.

3. Simulation of Identification Techniques – 60 minutes

In this 60-minute segment, students participate in a simulation exercise where they are provided with pre-incubated culture plates and asked to identify organisms using available biochemical tests and staining methods. This includes catalase and coagulase tests, oxidase testing, KOH mount for fungal infections, and Gram staining. Simulated diagnostic cards or virtual tools may also be used to reinforce correct identification. Each group is tasked with interpreting the growth pattern and preparing a probable diagnosis based on morphology and test results.

4. Lab Report Interpretation and Case Correlation – 60 minutes

In the final 60 minutes, students are provided with actual or simulated laboratory reports, including microscopy results, culture sensitivity, and biochemical test profiles. These reports are linked with short clinical case scenarios such as postpartum fever, vaginitis, or cervicitis. Students must interpret the findings, identify the causative organism, suggest the most appropriate antibiotic or antifungal treatment based on sensitivity patterns, and recommend infection control measures. A group discussion follows, guided by the teacher, to ensure understanding of real-world application and critical interpretation skills.

5. Conclusion and Feedback -30 minutes

The session concludes with a 10-minute recap of the key steps in sample collection, culture technique, organism identification, and clinical correlation. Students are encouraged to reflect on their experience and ask any remaining questions. Verbal or written feedback is collected to evaluate the effectiveness of the session and inform future improvements.

Practical 8.2 : Molecular Techniques :Polymerase Chain Reaction (PCR)

Total learning hours (2 hours)

1. Introduction and Demonstration – 20 minutes

The session begins with a 20-minute interactive introduction where the instructor explains the structure and components of microbiology and molecular diagnostic reports. Using a projected lab report, the teacher demonstrates how to read culture findings, interpret colony counts, assess sensitivity profiles, and understand molecular test outcomes. Special emphasis is given to clinically relevant examples such as E. coli in urinary infections, Candida in vaginal swabs, MRSA detection, and HPV genotyping in cervical screening.

2. Lab Report Interpretation Activity – 40 minutes

For the next 40 minutes, students are divided into small groups and provided with actual or simulated lab reports. Each group receives a case-based scenario (e.g., post-abortal sepsis, chronic vaginitis, cervical dysplasia) along with corresponding lab data such as Gram stain results, culture growth with antibiotic sensitivity, or PCR findings. Students analyze the reports, identify the organism, evaluate resistance patterns, and prepare a brief diagnostic summary including treatment implications. The teacher circulates among groups to guide and clarify doubts.

3. Student Presentations – 30 minutes

Each group presents their assigned case and lab interpretation to the rest of the class for 5–6 minutes. They explain the clinical relevance of the report, diagnostic challenges, and possible treatment options. Peer questioning is encouraged to stimulate active engagement and critical thinking. The instructor provides constructive feedback and corrects any misconceptions in real-time, enhancing learning through peer-to-peer discussion.

4. Consolidated Discussion and Recap – 30 minutes

In the final 30 minutes, the teacher leads a group discussion to consolidate key takeaways. Topics include recognizing multi-drug resistant organisms, interpreting minimal inhibitory concentration (MIC) values, understanding the implications of positive molecular results in asymptomatic patients, and integrating lab findings with clinical decision-making. Students are encouraged to ask questions and share insights. The session concludes with a short reflective exercise on how this skill will support better patient care in future practice.

Practical 8.3 : Laboratory Report / Understand Microbial Pathogenesis

Total learning hours (1 hour)

1. Bedside Demonstration – 20 minutes

The session begins with a 15-minute bedside demonstration in the gynecology or labor ward, where the instructor presents a patient (real or simulated) with symptoms of vaginal discharge, lower abdominal pain, or postpartum fever. The teacher discusses how to obtain a proper clinical history and demonstrates the correct method for

collecting high vaginal swabs or endocervical specimens. Students are guided through the process of correlating symptoms with suspected pathogens such as *Gardnerella vaginalis*, *Candida albicans*, *Trichomonas vaginalis*, *Chlamydia trachomatis*, or *E. coli* in postpartum infections.

2. Laboratory Demonstration – 20 minutes

In the next 20 minutes, the class moves to the microbiology lab or views digital slides and reports. The instructor shows wet mount microscopy, KOH prep for fungal elements, Gram staining results, and culture plates used for common genital infections. Real lab reports and images are used to demonstrate clue cells in bacterial vaginosis, budding yeast cells in candidiasis, motile trichomonads, or Gram-negative rods in puerperal sepsis. Students observe how diagnostic data is generated and are encouraged to ask questions about interpretation, sensitivity testing, and contamination issues.

3. Case-Based Learning – 20 minutes

The final 20 minutes are dedicated to case-based learning. Students are divided into small groups and provided with clinical vignettes along with associated lab reports. Each case includes a short history (e.g., post-abortal fever, foul-smelling discharge in pregnancy, dyspareunia with discharge), lab findings (wet mount, Gram stain, culture), and a question prompt: What is the most likely diagnosis? What is the responsible organism? What is the treatment approach? Each group briefly presents their case summary and clinical correlation. The instructor wraps up by reinforcing the connection between clinical suspicion, laboratory confirmation, and treatment planning.

Practical 8.4 : Guideline for safety protocol

Total learning hours (2 hours)

1. Introduction and Briefing – 10 minutes

The session begins with a 10-minute introduction in the skills lab or labor ward briefing area. The instructor explains the importance of aseptic techniques in obstetric practice, particularly during labor, delivery, episiotomy, and suturing. Students are introduced to common sources of hospital-acquired infections and how breaches in aseptic technique can lead to maternal sepsis, neonatal infections, and poor clinical outcomes.

2. Demonstration of Aseptic Protocols – 30 minutes

For the next 30 minutes, the instructor gives a live demonstration of aseptic protocols. This includes surgical hand scrubbing, donning and doffing sterile gloves and gowns, setting up a sterile delivery tray, and maintaining a sterile field during vaginal delivery or episiotomy. The demonstration is done slowly with verbal explanation and repeated if needed. Students observe and are encouraged to ask clarifying questions. Focus is placed on hand hygiene, safe handling of instruments, and avoiding contamination during labor procedures.

3. Bedside Teaching in Labor Room – 30 minutes

In this segment, lasting 30 minutes, students are taken to the labor ward (or use a high-fidelity mannequin if bedside is not feasible). Under supervision, students practice aseptic techniques in real-time settings, including preparation for per vaginal examination, perineal cleaning, and assistance during delivery. The instructor supervises closely to ensure proper technique and corrects errors gently. This hands-on experience allows students to connect theoretical principles with real clinical practice.

4. Simulation of Labor Scenarios – 30 minutes

In a controlled simulation environment, students participate in mock scenarios involving emergency delivery, episiotomy, or neonatal resuscitation. Each student performs aseptic techniques relevant to their assigned role—whether setting up the sterile tray, handling instruments, or assisting in delivery. Emphasis is placed on teamwork, sterile coordination, and infection control. After each scenario, a short debrief is held where the instructor highlights strengths and areas for improvement.

5. Recap and Reflection – 20 minutes

The session concludes with a 20-minute recap and reflection. Students are asked to share what they learned and describe one step in the aseptic process that they previously overlooked or underestimated. The instructor reinforces key takeaways and explains how adherence to aseptic techniques contributes to safe maternal and neonatal outcomes. Feedback is gathered to evaluate the session and guide future teaching.

Practical 8.5 : Indication, Collection & Interpretation of urine and blood screening test results

Total learning hours (4 hours)

1. Introduction and Case Framing – 20 minutes

The session begins with a 20-minute overview of commonly used biochemical markers in both obstetric and gynecological practice. The teacher introduces clinical conditions where these markers play a crucial role, such as early pregnancy assessment, prenatal screening, ovarian tumors, and hormonal imbalances. A case is presented: a 28-year-old woman with amenorrhea and a positive urine pregnancy test. This case forms the baseline for further exploration of β-hCG levels and differential diagnosis.

2. Demonstration of Sample Collection and Lab Techniques – 60 minutes

In this 40-minute segment, the teacher demonstrates proper sample collection techniques, including the timing of tests like serum β-hCG in early pregnancy, AFP during second trimester, or hormone panels on specific cycle days. Visual aids or lab videos are used to show how samples are processed, centrifuged, and interpreted by automated analyzers. Students observe the procedure and are encouraged to ask questions related to test reliability, sample handling, and common pre-analytical errors. This segment bridges theory with lab practice.

3. Case-Based Learning in Obstetrics – 50 minutes

The next 50 minutes focus on obstetric applications. Students are divided into groups and given different clinical cases. One group handles a case of suspected ectopic pregnancy with rising but suboptimal β-hCG levels. Another interprets triple or quad screen results suggesting Down syndrome. Yet another group handles a case of elevated AFP without fetal anomalies on ultrasound. Each group discusses the interpretation of biochemical values, associated clinical findings, and plans next steps (e.g., ultrasound, amniocentesis, emergency intervention). Each group then presents their case discussion to the class, followed by teacher-guided review and clarification.

4. Case-Based Learning in Gynecology – 50 minutes

This 50-minute segment mirrors the previous one but focuses on gynecological conditions. Cases include PCOS with LH/FSH ratio disturbance, ovarian cancer with elevated CA-125, and hyperprolactinemia as a cause of secondary amenorrhea. Students interpret hormonal profiles, discuss differential diagnoses, and recommend further workup like imaging or biopsy. Real or simulated lab reports are provided for hands-on interpretation. The goal is to strengthen students' clinical correlation between symptomatology, lab markers, and disease outcomes.

5. Group Discussion and Correlation – 40 minutes

The teacher now leads a 40-minute guided discussion integrating obstetric and gynecological applications. Key discussion points include: How biochemical markers influence decision-making in early pregnancy? What is the value of combining biochemical data with ultrasound and clinical signs? What is the role of serial testing in pregnancy monitoring? Students engage in cross-case comparisons, draw parallels, and discuss diagnostic dilemmas and ethical considerations in handling uncertain results.

6. Recap, Feedback, and Reflective Practice – 20 minutes

In the final 20 minutes, the session is concluded with a quick recap of essential biochemical markers and their clinical significance. Students are asked to write down two clinical insights and one question they still have. This is followed by a short reflective discussion on how today's practical session will impact their diagnostic thinking in clinical settings. The teacher also gathers verbal or written feedback about the session structure and content delivery.

Practical 8.6 : Significance of biochemical markers

Total learning hours (3 hours)

1. Introduction and Case Diagnosis – 20 minutes

The session begins with a 20-minute introduction where the teacher presents a clinical scenario: a 30-year-old woman at 11 weeks gestation undergoes first-trimester screening, and the combined results show low PAPP-A and elevated β-hCG. The teacher explains the components of first-trimester and second-trimester screening panels and initiates a guided discussion on their clinical purpose. Students are asked to share what they know about the markers and their associations with fetal and maternal outcomes. This sets the stage for the case-based exploration that follows.

2. Case-Based Learning – 40 minutes

Over the next 40 minutes, students work in small groups on a detailed extension of the clinical case. The patient later undergoes second-trimester quad screening, which shows elevated AFP and low estriol and inhibin A. The group is tasked with interpreting the results and correlating them with potential fetal conditions, such as neural tube defects or Trisomy 18. Students must discuss whether these results indicate increased risk for any adverse maternal outcomes, such as preeclampsia or placental insufficiency. Each group prepares a diagnostic summary and recommends further testing like ultrasound, amniocentesis, or fetal echocardiography. After group discussion, presentations are made, and the teacher provides input, correcting and clarifying where needed.

3. Lab Report Interpretation – 50 minutes

In this 50-minute session, students are given various sample biochemical screening reports—both first- and second-trimester results—paired with short clinical cases. Examples include low PAPP-A with normal NT, isolated high AFP, and a full quad screen with abnormal values. The teacher guides students as they work through the reports, emphasizing critical thinking and pattern recognition in linking lab markers with clinical implications.

4. Integrated Discussion on Outcomes – 40 minutes

This 40-minute interactive session connects biochemical findings with actual maternal and neonatal outcomes. The teacher uses clinical examples and research data to show how abnormal marker levels are associated with adverse outcomes like intrauterine growth restriction (IUGR), spontaneous abortion, or stillbirth. Students are encouraged to explore how biochemical abnormalities could reflect placental dysfunction or fetal anomalies. The discussion also includes reviewing the sensitivity and specificity of biochemical screening and the importance of follow-up with diagnostic tests like chorionic villus sampling or detailed fetal ultrasound.

5. Open Q&A and Critical Thinking Discussion – 20 minutes

The next 20 minutes are devoted to open discussion. Students ask questions based on their cases, lab interpretation exercises, or clinical rotations. The teacher poses higher-order questions such as: “How would you counsel a patient with low PAPP-A but no structural anomaly on ultrasound?” or “What is the importance of combining serum markers with ultrasound findings?” This section aims to deepen understanding through peer dialogue and mentor-led clarification.

6. Recap and Feedback – 10 minutes

In the final 10 minutes, students write a quick reflective note on what they learned and how they would apply it in clinical decision-making. The teacher summarizes key takeaways, including the importance of timely screening, correct interpretation, and clinical follow-up. Feedback is collected verbally or in writing to assess session effectiveness and improve future teaching strategies.

Practical 8.7 : Prenatal Diagnostic Test Results

Total learning hours(2 hours)

1. Introduction and Case Diagnosis – 10 minutes

The session begins with a 10-minute introduction where the teacher presents a brief clinical scenario: a 35-year-old pregnant woman at 12 weeks gestation is referred due to advanced maternal age. Initial ultrasound reveals increased nuchal translucency. The teacher uses this case to initiate discussion about the indications for prenatal genetic testing. The relevance of maternal age, previous obstetric history, and early ultrasound findings is highlighted. This short introductory case sets the foundation for deeper exploration of prenatal testing strategies and risk communication.

2. Case-Based Learning and Discussion – 30 minutes

In this 30-minute segment, students are divided into small groups to work on the full clinical scenario. The case continues: the patient is offered nuchal translucency screening and serum markers, which indicate high risk for Trisomy 18. She is counseled and opts for CVS. The teacher provides key lab values and CVS findings. Students are asked to interpret the screening results, evaluate the decision to proceed with CVS, and discuss alternative or confirmatory options such as amniocentesis. Each group discusses and prepares responses to the following: What are the indications and timing for CVS versus amniocentesis? How do you explain risk to patients? What are the implications of a positive result? One student from each group presents their summary. The teacher moderates discussion and provides corrections and additional context as needed.

3. Demonstration of Procedures – 20 minutes

For the next 20 minutes, the teacher demonstrates (using videos or models) how procedures like amniocentesis and CVS are performed, explaining the technique, timing, indications, risks, and safety measures for each. Visuals are also used to demonstrate ultrasound markers of genetic abnormalities, particularly nuchal translucency, nasal bone absence, and other first-trimester findings. Students observe and ask questions during the demonstration. This segment reinforces technical understanding and procedural reasoning.

4. Lab Report Interpretation – 30 minutes

In the following 30-minute activity, students are given anonymized lab reports from prenatal testing, including CVS karyotype showing Trisomy 18, amniocentesis with abnormal AFP levels suggesting neural tube defect, and ultrasound reports indicating increased nuchal translucency. Students are asked to interpret these reports in light of the earlier case. They correlate lab data with the clinical picture and determine next steps, including confirmation, referral, counseling, or pregnancy management options. This hands-on experience enables students to practice diagnostic thinking and application of theoretical knowledge.

5. Tutorial and Communication Skills – 20 minutes

The final 20 minutes are dedicated to a guided tutorial focusing on how to communicate genetic risk and prenatal diagnostic results to patients. The teacher leads an interactive discussion on effective strategies for explaining complex findings, using clear, non-technical language. Role-play scenarios are introduced where one student plays the clinician and another the patient. Emphasis is placed on empathy, honesty, clarity, and respecting patient choices. This tutorial develops the students' ability to convey sensitive information responsibly and with compassion.

6. Recap and Feedback – 10 minutes

The session concludes with a 10-minute recap and feedback. Students are asked to reflect on what they learned and write a “one-minute summary” on how they would explain a positive prenatal diagnosis to a patient. The teacher wraps up with key takeaways and encourages students to continue practicing clinical communication in their rotations.

Practical 8.8 : Genetic testing report interpretation.

Total learning hours (2 hours)

1. Introduction and Warm-Up – 10 minutes

The session begins with a 10-minute introduction where the teacher provides an overview of the types of genetic tests used during pregnancy. This includes non-invasive prenatal testing (NIPT), karyotyping, and chromosomal microarray. To initiate critical thinking, the teacher poses a question to the students: “Why is early diagnosis of chromosomal abnormalities important in maternal and fetal care?” This brief discussion sets the context for the session and activates the learners’ prior knowledge.

2. Case-Based Learning (Case 1) – 30 minutes

For the next 30 minutes, students participate in case-based learning. A clinical scenario is presented involving a 29-year-old pregnant woman at 13 weeks of gestation with a history of two previous miscarriages. Her current ultrasound shows increased nuchal translucency, and her NIPT report indicates Trisomy 21. Students, working in small groups, are tasked with interpreting the findings, discussing the implications of Trisomy 21 on fetal development and maternal health, deciding on further investigations such as amniocentesis, and considering the need for genetic counseling. Each group is given time to discuss and then present their conclusions. The teacher facilitates the process, guiding students to think critically and apply clinical reasoning.

3. Lab Report Interpretation – 30 minutes

In the following 30 minutes, students engage in interpreting real or simulated lab reports related to genetic abnormalities. Each group receives a unique lab report along with a brief clinical vignette. One group may receive a karyotype indicating Turner syndrome (45,X), while another may interpret a microarray report showing a 22q11.2 microdeletion suggestive of DiGeorge syndrome. Students are required to analyze the report, correlate it with the clinical findings, determine the potential impact on the pregnancy, and suggest appropriate clinical steps such as further testing, genetic counseling, or referral to a specialist. This exercise emphasizes the practical application of lab data in clinical settings.

4. Group Discussion and Clinical Correlation – 40 minutes

The next 40 minutes are dedicated to a guided group discussion to consolidate learning and promote higher-order thinking. The teacher facilitates an interactive session where students are encouraged to answer questions such as how certain gene mutations like Factor V Leiden or MTHFR can affect pregnancy outcomes, how to interpret a positive family history in light of genetic findings, and how to approach ethical considerations while communicating genetic risks to patients. Visual aids like chromosomal

maps and sample pedigrees may be used to support understanding. This portion of the session helps students integrate clinical and laboratory knowledge and prepares them for real-world scenarios.

5. Recap and Feedback – 10 minutes

In the final 10 minutes, the session concludes with a quick recap and reflective activity. Students are asked to write a short “one-minute paper” summarizing the most important point they learned during the session. The teacher then summarizes key takeaways and collects feedback from students about the session’s effectiveness. This concluding activity reinforces learning and provides valuable insights into students’ understanding and engagement.

Experiential learning Activity

Experiential-Learning 8.1 : Microbiologically linked gynaecological or obstetric infections.

Total activity hours (4 hours)

1. Simulation-Based Clinical Case Setup and Analysis – 90 minutes

Students are introduced to two to three simulated patients with microbiologically linked gynecological or obstetric infections (e.g., urinary tract infection in pregnancy, postpartum endometritis, or recurrent vaginal candidiasis). Each simulation includes patient history, physical findings, and laboratory data such as Gram stain, urine analysis, vaginal swab culture, and antibiotic sensitivity reports. Students work independently or in pairs to perform focused assessments, interpret microbiological findings, and identify the organism and infection site. They also make preliminary notes on Unani concepts such as Amraz Sadra, Tafarruq-e-Ittisāl, or Imtila contributing to the condition.

2. Clinical Round-Style Case Discussion – 60 minutes

Students then enter a supervised clinical round format where they present one of the cases in detail to the group as if in a hospital round. Each student takes a turn to present the patient, report laboratory findings, suggest a diagnosis, and explain their rationale for selecting a treatment plan that includes both modern antimicrobials and Unani interventions. Peers ask follow-up questions and challenge assumptions, while the faculty provides feedback at the end of each round. This immersive round format helps build real-time diagnostic confidence and case communication skills.

3. Focused Group Discussion and Cross-Case Analysis – 45 minutes

Following the rounds, students regroup and independently identify key microbiological patterns across all cases discussed. They engage in student-led discussion about common pathogens, resistance patterns, and diagnostic challenges. Each student compares at least two cases to highlight variations in infection source, microbiological diagnosis, and the scope for integrated Unani-modern treatment. This deepens their understanding of clinical variability and diagnostic nuance.

4. Reflection, Peer Feedback, and Clinical Integration Planning – 45 minutes

To conclude, each student writes a brief reflective summary identifying which microbiological and clinical reasoning skills they applied during the session, and how the simulated clinical environment helped them prepare for real patient care. They also complete a peer feedback checklist for presentations and diagnostic approaches. Finally, students propose how they would handle a similar case independently in a real hospital or Unani clinic, focusing on infection control, patient counseling, and integrating systems of care.

Experiential-Learning 8.2 : Infectious diseases in pregnancy

Total activity hours (3 hours)

1. Clinical Case Review and Microbiological Workup – 75 minutes

Students are given three complex clinical cases commonly encountered in Amrāze Niswān, such as *bacterial vaginosis*, chronic cervicitis, and puerperal infections. Each case includes patient history, symptoms, and microbiological reports like Gram stain, wet mount, vaginal pH, culture sensitivity, and leukocyte count. Students work independently to analyze the data, identify the causative pathogens, assess infection severity, and understand antimicrobial sensitivity profiles. They also interpret the case through Unani lens—identifying underlying Mizaj, Sue Mizaj, and corresponding Asbab (causes), and begin formulating a dual approach to treatment.

2. Student Presentation and Diagnostic Reasoning – 60 minutes

Each student selects one case and delivers an individual presentation (8–10 minutes) where they explain their diagnostic process, microbiological interpretation, and a proposed integrative treatment strategy. This includes modern pharmacological management (based on sensitivity reports) and corresponding Unani therapy (e.g., Roghaniyat, Zimad, Hammam, or internal eers listen, evaluate reasoning, and ask clinical or diagnostic questions. Presentations are structured to encourage clarity in integrating two systems of medPresent case studies involving infectious diseases in pregnancy to peers, integrating microbiological findings with clinical outcomesicine with equal scientific rigor.

3. Peer Review, Comparative Case Discussion, and Integration Exercise – 30 minutes

Following the presentations, students participate in group peer discussions, comparing similar cases and differing treatment approaches. Each student reflects on how microbiological diagnostics impacted clinical decision-making and how Unani interventions complemented modern care. They then complete an integration worksheet summarizing their understanding of the pathogen, diagnostic method, and combined treatment logic.

4. Reflection and Clinical Application Summary – 15 minutes

To close the session, students write an individual reflection highlighting their personal learning from combining microbiological evidence with Unani wisdom. They comment on how this integrated approach enhances clinical practice and identify areas where further learning or research is needed.

Experiential-Learning 8.3 : Microbiological Diagnostics in Amrāze Niswān

Total activity hours (2 hours)

1. Case-Based Learning and Microbiological Interpretation – 60 minutes

Students are given two detailed clinical cases related to gynecological infections—one involving vaginal candidiasis and another related to pelvic inflammatory disease. Each case includes symptoms, clinical findings, sample lab reports (gram stain, culture and sensitivity, wet mount, etc.), and basic patient background. Students independently analyze these reports, identify causative organisms, interpret antimicrobial sensitivity results, and match findings to the clinical diagnosis. They are also expected to identify any Mizaj imbalances or related Sual from a Unani perspective and propose combined treatment strategies, e.g., using Muqawwi Rahim with appropriate antibiotics.

2. Independent Presentation and Case Discussion – 45 minutes

Each student prepares and delivers a short individual presentation (5–7 minutes) on one of the given cases, explaining the diagnostic approach, interpretation of microbiological findings, the rationale for antimicrobial choice, and the Unani principles applicable to that specific case (e.g., Tanqiyah Mawad, Tadeel-e-Mizaj, or local applications). Peers provide feedback on clinical reasoning, accuracy of microbiological interpretation, and clarity of Unani integration. Faculty remains as facilitator, ensuring each student independently defends their analysis and plan.

3. Reflection and Integration Summary – 15 minutes

In the final segment, students complete a short reflective note summarizing what they learned about integrating microbiology with Unani clinical reasoning, the importance of laboratory correlation, and how they can use this skill in real clinical settings. Optional discussion of additional microbial conditions or rare pathogens in Amrāze Niswān may be initiated by students as part of independent exploration.

Experiential-Learning 8.4 : Clinical Rotations in Biochemistry lab.

Total activity hours(3 hours)

1. Brainstorming and Concept Mapping – 30 minutes

The session begins with students working individually and then in small peer groups to brainstorm the major biochemical processes involved in female reproductive health. They map out hormonal pathways (e.g., HPO axis), the role of estrogens, progesterone, hCG, and placental hormones, as well as fetal biochemical markers (e.g., alpha-fetoprotein, fetal enzymes). Each group prepares a concept map on paper or digitally, summarizing their collective understanding. Faculty remain observers while students generate and organize knowledge on their own.

2. Peer-Assisted Thematic Discussion – 30 minutes

Following brainstorming, students engage in student-led small-group discussions where each student selects one subtopic (e.g., biochemical changes during early pregnancy, fetal endocrine system development, or placental metabolism) and explains it to peers using their notes or concept maps. The other group members ask questions and add supplementary points. These peer discussions promote collaborative clarification and deepen conceptual understanding without direct faculty instruction.

3. Independent Mini-Presentations – 45 minutes

Each student prepares a 3–5 minute mini-presentation on a specific biochemical process they researched during the earlier phases, such as the role of progesterone in implantation, hCG function in early gestation, or biochemical signaling in fetal organ maturation. They present to their small groups using whiteboards or slides, with peers providing constructive feedback using a pre-designed checklist. This reinforces their ability to independently explain and teach key biochemical concepts.

4. Wrap-Up and Self-Reflection – 15 minutes

To conclude, students write a brief reflective summary outlining the processes they understood best, how peer learning helped their comprehension, and areas they wish to explore further. Select students share their reflections aloud to reinforce key insights. Faculty offer closing remarks and optional follow-up reading material.

Experiential-Learning 8.5 : Biochemical analysis of Gynaecological and Obstetrical diseases.

Total activity hours (3 hours)

1. Case-Based Learning and Report Interpretation – 60 minutes

Students begin by individually reviewing three structured clinical cases: a pregnant woman with suspected preeclampsia, a non-pregnant female with PCOS, and a postmenopausal woman presenting with abnormal uterine bleeding. Each case includes patient history, signs and symptoms, and biochemical lab results such as serum beta-hCG, liver enzymes, blood glucose, HbA1c, insulin levels, FSH, LH, and estradiol. Students are tasked with analyzing and interpreting the biochemical data in relation to the clinical context, noting possible diagnoses and recommending further evaluation.

2. Peer-Led Bedside Demonstration and Observational Practice – 45 minutes

In this segment, students are grouped in small teams and rotate through peer-led bedside demonstration stations. At each station, one student presents a simulated or standardized patient scenario (e.g., gestational diabetes case or hyperemesis gravidarum with electrolyte imbalance) while others observe and identify relevant biochemical indicators. Each student takes a turn presenting and leading interpretation. Faculty supervision is minimal, allowing students to learn by demonstration, active participation, and peer evaluation.

3. Student-Led Group Discussion and Analysis – 45 minutes

Students independently lead small-group discussions on the cases and bedside experiences, focusing on the interpretation of biochemical tests in diagnosis, monitoring, and management of gynecological and obstetric conditions. They compare interpretations, challenge each other's reasoning, and clarify clinical decisions. Faculty provides supportive resources and clarifies doubts only when necessary, promoting critical thinking and collaborative learning.

4. Reflection and Peer Feedback – 30 minutes

In the final half hour, students complete a reflective worksheet highlighting key biochemical markers learned, challenges in interpretation, and areas they feel more confident about. They also provide peer feedback on each other's demonstration and discussion skills using a structured checklist. This fosters accountability, peer trust, and deeper understanding of biochemical analysis as it applies to patient care.

Experiential-Learning 8.6 : Biochemical indicators of menopause

Total activity hours (3 hours)

1. Case-Based Lab Report Analysis – 60 minutes

The session begins with individual case-based exercises. Each student receives two clinical cases: one of a perimenopausal woman with complaints of hot flashes and irregular cycles, and another of a postmenopausal woman with osteopenia. Each case is accompanied by relevant lab data such as serum FSH, LH, estradiol, lipid profile, and bone metabolism markers. Students independently analyze the biochemical parameters, interpret menopausal status, assess cardiovascular risk, and evaluate bone health. They document their findings and suggest clinical advice or further investigations accordingly.

2. Self-Directed Learning: Hormonal & Metabolic Changes in Menopause – 60 minutes

In this segment, students engage in self-directed reading using pre-assigned digital or printed learning materials that cover the hormonal changes of menopause, lipid metabolism shifts, and bone density implications. Each student is asked to independently summarize key points and complete a short worksheet that includes interpreting different biochemical trends (e.g., increasing LDL, decreasing estrogen, and changes in calcium regulation). This reinforces independent knowledge acquisition and application to clinical scenarios.

3. Case Presentation and Peer Comparison – 40 minutes

Each student prepares and delivers a short, individual presentation summarizing one of the cases they worked on earlier. They explain their interpretation of the biochemical markers and their clinical relevance. Presentations are made in small peer groups, allowing each student to hear different interpretations of similar lab values. Peers offer comments and reflections, guided by a checklist to ensure critical points are addressed (e.g., diagnosis justification, role of each biochemical test, suggested management plan).

4. Reflection and Concept Integration – 20 minutes

In the final part of the session, students complete a reflective writing activity where they assess how well they understood the role of biochemical indicators in diagnosing menopause and monitoring associated health risks. They also write how this knowledge could influence real-life clinical decision-making. A brief round of voluntary sharing is held, with the faculty providing minimal input, encouraging student autonomy and confidence in clinical reasoning.

Experiential-Learning 8.7 : Advanced medical genetic technologies

Total activity hours(4 hours)

1. Independent Case Analysis: Genetics in Reproductive Health – 60 minutes

The session begins with students independently reviewing three complex reproductive health cases: one focused on prenatal screening for genetic syndromes, one involving genetic causes of infertility (e.g., Klinefelter syndrome, Y-chromosome microdeletion), and one with a family history suggestive of hereditary gynecological cancers (e.g., BRCA1/2 mutations). Each student receives full patient history, genetic test results, and family pedigree charts. They are required to analyze each case, identify genetic influences, make diagnostic interpretations, and write a summary with proposed genetic counseling and testing strategies.

2. Literature-Based Research and Analysis of Genetic Technologies – 60 minutes

In this self-directed segment, students are given access to selected review articles, abstracts, or online resources about modern genetic technologies such as CRISPR-Cas9, gene silencing, and pre-implantation genetic diagnosis (PGD). Each student selects one topic and independently researches its mechanism, medical applications (especially in gynecology/obstetrics), limitations, and ethical implications. They prepare a 1-page briefing note or infographic summarizing their findings, which will later be shared with peers.

3. Peer Presentation and Student-Led Discussion – 60 minutes

Students individually present their case summaries and briefing notes in small peer groups. Each student explains how they approached the case analysis, interpreted the genetics, and applied the information clinically. For the research part, they present their selected genetic technology and explain its relevance in modern reproductive medicine. Peers ask questions and offer critiques. The faculty facilitates only when needed but primarily observes student-led engagement and critical thinking.

4. Reflection and Ethical Simulation – 50 minutes

In the final hour, students complete a written reflection on the ethical dilemmas posed by genetic testing and editing—such as using CRISPR for embryo modification or disclosing hereditary cancer risks to family members. They are also given short ethical simulation scenarios to reflect on individually (e.g., Should a patient with a BRCA mutation be advised to undergo prophylactic surgery? Should CRISPR be used to edit embryos with known lethal mutations?). Students respond in writing and then share key points in a closing circle discussion.

5. Conclusion and Self-Evaluation – 10 minutes

The session concludes with students completing a self-evaluation checklist where they assess their understanding of case interpretation, confidence in explaining genetic technologies, and ability to apply medical genetics to reproductive health. Feedback is collected for session improvement and optional follow-up resources are provided.

Experiential-Learning 8.8 : Genetic markers for trisomies and cytogenetics

Total activity hours (4 hours)

1. Self-Guided Case Review and Report Analysis – 60 minutes

Students begin the session by independently reviewing a set of prenatal cases provided in the form of digital or printed case files. Each case includes patient history, ultrasound findings (such as nuchal translucency, nasal bone, or structural anomalies), and NIPT reports. Students are instructed to identify the likely chromosomal abnormality based on the data, make clinical interpretations, and outline confirmatory testing strategies. No direct teaching is involved during this segment; students work independently and note down their findings in a structured worksheet.

2. Independent Cytogenetic Simulation – 60 minutes

Next, students receive cytogenetic case scenarios involving recurrent miscarriages and congenital anomalies. Each scenario includes parental karyotypes, fetal microarray or karyotype results, and relevant clinical backgrounds. Students independently analyze the reports to identify chromosomal rearrangements or abnormalities, assess recurrence risks, and determine appropriate next steps in genetic counseling. They fill out a case interpretation form on their own, mimicking the decision-making process of a clinical geneticist.

3. Peer-Led Demonstration and Explanation – 60 minutes

In this hour, students are divided into small peer groups where each student takes turns demonstrating and explaining a genetic test technique (e.g., interpretation of NIPT report, reading a karyotype, recognizing ultrasound markers of trisomies) to their peers. Each student is given a specific topic or test result in advance to prepare independently. The peers assess each other using a checklist while the faculty acts as a silent observer, intervening only if necessary. This promotes autonomy, responsibility, and mastery of practical interpretation skills.

4. Independent Presentation and Group Reflection – 50 minutes

Students individually prepare a 5–7 minute presentation summarizing one case they interpreted earlier, including diagnosis, interpretation of genetic findings, and clinical implications. They present their work to the group, focusing on how they independently arrived at their conclusions. After all presentations, a group discussion follows where students reflect on challenges faced during self-directed interpretation and decision-making. The faculty facilitates only the discussion but does not lead it, allowing students to critically engage and learn from one another.

5. Wrap-Up and Self-Evaluation – 10 minutes

The session concludes with a 10-minute self-evaluation exercise. Each student fills a brief reflective form noting what they learned, what skills they feel confident in, and what areas require further development. The faculty collects these for feedback and offers optional resources for deeper study.

Modular Assessment	
Assessment method	**Hour**
Instructions - Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. 1. Project-Based Assessment (25 Marks) Content Quality (10 Marks): Depth and relevance (e.g., microbial infections, hormonal assays, genetic counseling). Data Analysis (5 Marks): Interpretation of lab or genetic results. Application (5 Marks): Clinical relevance in diagnosis/management. Presentation (5 Marks): Well-structured report. Example Topics: Clinical Microbiology: Role of microbial infections (e.g., Candida albicans in vaginal candidiasis). Applied Biochemistry: Hormonal assays in PCOS or thyroid dysfunction in pregnancy. Medical Genetics: Genetic counseling in recurrent miscarriages or chromosomal anomalies in pregnancy. 2. Viva Voce (25 Marks) Knowledge (10 Marks): Core concepts (e.g., PCOS biochemistry, genetic markers). Critical Thinking (5 Marks): Analysis of clinical scenarios. Application (5 Marks): Problem-solving based on lab/genetic data.	4

Communication (5 Marks): Clear, concise responses. Or Any practical in converted form can be taken for assessment. (25 Marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as assessment. (25 Marks) (Total marks 50)	

Table 4 : Practical Training Activity

(*Refer table 3 of similar activity number)

Practical No*	Practical name	Hours
1.1	Vulval examination & Procedures	2
1.2	Vaginal Examination	3
1.3	Pelvic Examination & Procedure	5
1.4	Procedures related to fallopian tube and ovary	5
1.5	Pelvimetry and fetal skull examination	5
2.1	Follicular growth, ovarian hormones and vaginal environment	4
2.2	Physiological process of menstruation.	6
2.3	Pathological evaluation/Clinical evaluation of female genital organs	5
2.4	Immunology based Diseases	5
3.1	ART Procedures & Techniques	5
3.2	Unani perspectives on implantation and early embryonic development	2
3.3	Implantation & Embryogenesis	2
3.4	Genital tract anomalies interpretation.	4
3.5	Placental and Fetal Abnormalities	4
3.6	Clinical Assessment of Lactation Factors	3
4.1	Assessment of Pubertal Changes	4
4.2	Pregnancy Examination Skills	4
4.3	Genital Tract Function During Pregnancy	4
4.4	Puerperium learning Module	4

4.5	Menopausal Assessment Skills Training	4
5.1	H-P-O Axis Simulation	2
5.2	H-P-O axis Regulation & Assessment	2
5.3	Reproductive Endocrinology Aassessment	3
5.4	Clinical findings and lab data related to H-P-O axis	3
5.5	Lifestyle Intervention for Reproductive Endocrinopathies	2
5.6	High risk pregnancy and synthetic hormones	3
5.7	Clinical Hormone therapy Simulation	3
5.8	Environmental Impact on Placenta	2
6.1	Clinical Mizāj Evaluation	2
6.2	Temperament analysis in Amraze Niswan	2
6.3	Mizaj-Based Patient Assessment	2
6.4	Assessment of Nabd	3
6.5	Assessment of Bawl wa Baraz	3
6.6	Asbāb-e-Sitta Zarooriya in Amraze Niswan	4
6.7	Asbāb-Based Clinical Evaluation	4
7.1	Exfoliative cytology	5
7.2	Cytological examination techniques	5
7.3	Pathological changes in common gynaecological diseases.	5
7.4	Placental histology and pregnancy-related complications.	5
8.1	Safety and laboratory Protocols, Collection and Handling of Specimens	4
8.2	Molecular Techniques :Polymerase Chain Reaction (PCR)	2
8.3	Laboratory Report / Understand Microbial Pathogenesis	1

8.4	Guideline for safety protocol	2
8.5	Indication, Collection & Interpretation of urine and blood screening test results	4
8.6	Significance of biochemical markers	3
8.7	Prenatal Diagnostic Test Results	2
8.8	Genetic testing report interpretation.	2

Table 5 : Experiential learning Activity

(*Refer table 3 of similar activity number)

Experiential learning No*	Experiential name	Hours
1.1	Clinical and Surgical evaluation	5
1.2	Vaginal Examination & Procedural Skills	4
1.3	P/V examination & imaging Interpretation	3
1.4	Anatomical basis of common gyneacological conditions	3
1.5	Clinical and Surgical evaluation.	3
1.6	Anatomical modeling of the ovary and fallopian tubes.	3
1.7	Pelvic assessment	5
2.1	Follicular Monitoring & Vaginat Assessment	5
2.2	Clinical Approach to Menstrual Disorders	4
2.3	Physiological process of menstruation	4
2.4	Pathological changes in females genital organs	7
2.5	Simulation-Based Decision making / Clinical Case Presentation	6
3.1	Comprehensive ART Clinical Training	4
3.2	Clinical Case Analysis in ART	3
3.3	Hormonal and cellular interactions	3
3.4	Case- based Analysis of Genital Tract Anomalies	4
3.5	Diagnostic Approach to Placental and Fetal Abnormalities	2
3.6	Fetal Growth Diagnosis & Analysis	3
3.7	Placental Insufficiency impact on fetus	2

3.8	Lactation Support and Awareness Program	5
4.1	Pubertal Assessment and Teaching	6
4.2	Pregnancy-Related Genital Changes Simulation	4
4.3	Postpartum case experiences	6
4.4	Climacteric Case-Based Learning	5
4.5	Perimenopausal women individualized care strategies	5
5.1	Disorders of H-P-O axis	3
5.2	Hormonal interactions within hypothalamo-pituatory-ovarian axis	3
5.3	Reproductive endocrinology disorders assesment	3
5.4	Hormonal profiles analysis	4
5.5	Management plans for complex reproductive health conditions.	3
5.6	Placental hormones assesment	3
5.7	Hormonal Therapy	4
5.8	Long term effects of fetal hormonal imbalances	3
6.1	Mizāj-based diagnostic profile	3
6.2	Protocol related to Umoor e Tabiya in Amraze Niswan	3
6.3	Clinical impact of Akhlat in Amraze Niswan	3
6.4	Types of Nabd in Amrāze Niswān wa Qabālat.	2
6.5	Interpretation of the diagnostic tools	2
6.6	Nabd, Bawl wa Baraz in Amrāze Niswān wa Qabālat.	4
6.7	Interventions Based on Asbāb Sitta Zaruriyya	3
6.8	Holistic Care Plan for Female Reproductive Health	3
6.9	Review on Asbāb Sitta Zaruriyya with recent scientific updates.	3

7.1	Normal and abnormal cellular structures.	2
7.2	Pap smear, VIA and VILLI	5
7.3	Cytological application in gynaecological cases.	3
7.4	Interpretation of cytology and histopathology realted to gynecological diseases	3
7.5	Normal and abnormal histoloigcal samples	5
7.6	Histo-Clinical Integration	4
7.7	Multidisciplinary Placental Review	4
8.1	Microbiologically linked gynaecological or obstetric infections.	4
8.2	Infectious diseases in pregnancy	3
8.3	Microbiological Diagnostics in Amrāze Niswān	2
8.4	Clinical Rotations in Biochemistry lab.	3
8.5	Biochemical analysis of Gynaecological and Obstetrical diseases.	3
8.6	Biochemical indicators of menopause	3
8.7	Advanced medical genetic technologies	4
8.8	Genetic markers for trisomies and cytogenetics	4

Table 6 : Assessment Summary: Assessment is subdivided in A to H points
6 A : Number of Papers and Marks Distribution

Subject Code	Paper	Theory	Practical	Total
UNIPG-AB-ANQ	1	100	200	300

6 B : Scheme of Assessment (Formative and Summative Assessment)

Credit frame work

UNIPG-AB-ANQ consists of 8 modules totaling 16 credits, which correspond to 480 Notional Learning Hours. Each credit comprises 30 Hours of learner engagement, distributed across teaching, practical, and experiential learning in the ratio of 1:2:3. Accordingly, one credit includes 5 hours of teaching, 10 hours of practical training, 13 hours of experiential learning, and 2 hours allocated for modular assessment, which carries 25 marks.

Formative Assessment : Module wise Assessment:will be done at the end of each module. Evaluation includes learners active participation to get Credits and Marks. Each Module may contain one or more credits.

Summative Assessment: Summative Assessment (University examination) will be carried out at the end of Semester II.

6 C : Calculation Method for Modular Grade Points (MGP)

Module Number & Name (a)	Credits (b)	Actual No. of Notional Learning Hours (c)	Attended Number of notional Learning hours (d)	Maximum Marks of assessment of modules (e)	Obtained Marks per module (f)	MGP =d*f/c*e*100
M1. زنانہ اعضاء تناسلیہ، جوف عانہ اور مجمعہ جنین کی اطلاقی تشریح وعمومی جائزہ Overview of anatomy and applied anatomy of female genital organ, pelvic cavity and fetal skull	2	60		50		
M2. اعضاءِ تولید کا منافع الاعضائی بیان، سریریاتی ماہیت مرضی اور مناعت کا اطلاقی بیان Applied Physiology of reproductive organs, Clinical Pathophysiology & Applied aspects of Immunology	2	60		50		
M3. طبعی نظام تولید (علم جنین اور اس کا ارتقاء) Physiology of reproduction (Embryology)	2	60		50		
M4. بلوغت، حمل، وضع حمل، نفاس اور انقطاع حیض کے دوران زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی وتشریحاتی تغیرات Physiological and anatomical changes in female genital tract during puberty, Pregnancy, Labour,Puerperium and menopause	2	60		50		
M5. نظامِ تولید زنانہ سے متعلق نظام لاقناتی Endocrinology related to female reproductive system	2	60		50		
M6. امراض نسواں وقبالہ کے مبادیات اور ان میں مستعمل یونانی اصول وضوابط Unani fundamental principles applied in Amrāze Niswān wa Qabālat	2	60		50		
M7. امراض نسواں وقبالہ میں مستعمل خلوی و نسیجی تشریح Cytology and Histopathology in Amrāze Niswān wa Qabālat	2	60		50		
M8. امراض نسواں وقبالہ میں علم احیاء دقیقہ، کیمیاء حیاتی اور علم الجینیات کا بیان Clinical Microbiology, Applied Biochemistry and Applied Medical Genetics in Amrāze Niswān wa Qabālat	2	60		50		

MGP = ((Number of Notional learning hours attended in a module) X (Marks obtained in the modular assessment) / (Total number of Notional learning hours in the module) X (Maximum marks of the module)) X 100

6 D : Semester Evaluation Methods for Semester Grade Point Average (SGPA)

SGPA will be calculated at the end of the semester as an average of all Module MGPs. Average of MGPS of the Semester For becoming eligible for Summative assessment of the semester, student should get minimum of 60% of SGPA

SGPA = Average of MGP of all modules of all papers = add all MGPs in the semester/ no. of modules in the semester Evaluation Methods for Modular Assessment

A S.No	B Module number and Name	C MGP
1	M1. زنانہ اعضاء تناسلیہ، جوف عانہ اور مجمہ ءِ جنین کی اطلاقی تشریح وعمومی جائزہ Overview of anatomy and applied anatomy of female genital organ, pelvic cavity and fetal skull	C 1
2	M2. اعضاءِ تولید کا منافع الاعضائی بیان، سریریاتی ماہیت مرضی اور مناعت کا اطلاقی بیان Applied Physiology of reproductive organs, Clinical Pathophysiology & Applied aspects of Immunology	C 2
3	M3. طبعی نظام تولید (علم جنین اور اس کا ارتقاء) Physiology of reproduction (Embryology)	C 3
4	M4. بلوغت، حمل، وضع حمل، نفاس اور انقطاع حیض کے دوران زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحاتی تغیرات Physiological and anatomical changes in female genital tract during puberty, Pregnancy, Labour,Puerperium and menopause	C 4
5	M5. نظامِ تولید زنانہ سے متعلق نظام لاقنائی Endocrinology related to female reproductive system	C 5
6	M6. امراض نسواں و قبالہ کے مبادیات اور ان میں مستعمل یونانی اصول وضوابط Unani fundamental principles applied in Amrāze Niswān wa Qabālat	C 6
7	M7. امراض نسواں و قبالہ میں مستعمل خلوی و نسیجی تشریح Cytology and Histopathology in Amrāze Niswān wa Qabālat	C 7
8	M8. امراض نسواں و قبالہ میں علم احیاء دقیقہ، کیمیاء حیاتی اور علم الجینیات کا بیان Clinical Microbiology, Applied Biochemistry and Applied Medical Genetics in Amrāze Niswān wa Qabālat	C 8
	Semester Grade point Average (SGPA)	(C1+C2+C3+C4+C5+C6+C7+C8) / Number of modules(8)

S. No	Evaluation Methods
1.	Method explained in the Assessment of the module or similar to the objectives of the module.

6 E : Question Paper Pattern

MD/MS Unani Examination
UNIPG-AB-ANQ
Sem II
Time: 3 Hours ,**Maximum Marks:** 100
INSTRUCTIONS: All questions compulsory

		Number of Questions	Marks per question	Total Marks
Q 1	Application-based Questions (ABQ)	1	20	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Analytical based structured Long answer question (LAQ)	4	10	40
				100

6 F : Distribution for summative assessment (University examination)

S.No	List of Module/Unit	ABQ	SAQ	LAQ
(M- 1) زنانہ اعضاء تناسلیہ، جوف عانہ اور ممحمہ جنین کی اطلاقی تشریح وعمومی جائزہ Overview of anatomy and applied anatomy of female genital organ, pelvic cavity and fetal skull (Marks: Range 5-20)				
1	**(U-1)** فرج اور مجاورات فرج کی تشریح اور اطلاقی بیان Anatomy and applied aspects of Vulva with surrounding structures	No	Yes	Yes
2	**(U-2)** مہبل کی تشریح اور اطلاقی بیان Anatomy and applied aspects of vagina	Yes	Yes	Yes
3	**(U-3)** رَحم اور عنق رحم کی تشریح اور اطلاقی بیان Anatomy and applied aspects of uterus and cervix	Yes	Yes	Yes
4	**(U-4)** مبیضین اور قاذفین کی تشریح اور اطلاقی بیان Anatomy and applied aspects of Ovary and Fallopian Tubes	Yes	Yes	Yes
5	**(U-5)** فرشِ عانہ، جوفِ عانہ اور ممحمہ جنین کی تشریح Anatomy of the pelvic diaphragm, pelvic cavity and fetal skull	Yes	Yes	Yes
(M- 2) اعضاءِ تولید کا منافع الاعضائی بیان، سریریائی ماہیت مرضی اور مناعت کا اطلاقی بیان Applied Physiology of reproductive organs, Clinical Pathophysiology & Applied aspects of Immunology (Marks: Range 5-20)				
1	**(U-1)** Unit-1: مبیضین، قاذفین، رحم اور مہبل کے طبعی افعال واطلاقی بیان Physiology of ovary, fallopian tube, uterus and vagina and its applied aspect	Yes	Yes	Yes
2	**(U-2)** دورہ طمث کا میکانیہ اور اس کا اطلاقی بیان Physiology of menstruation and its applied aspects	Yes	Yes	Yes
3	**(U-3)** اعضاءِ تولید کی ماہیت مرضی کا سریریائی بیان Clinical Pathophysiology of female reproductive organs	Yes	Yes	No
4	**(U-4)** امراض نسواں وقبالہ میں مناعت کا اطلاقی پہلو Applied aspects of Immunology in Amrāze Niswān wa Qabālat	Yes	Yes	No
(M- 3) طبعی نظام تولید (علم جنین اور اس کا ارتقاء) Physiology of reproduction (Embryology) (Marks: Range 5-20)				
1	**(U-1)** تبویض اور بارآوری Gametogenesis and fertilization	Yes	Yes	Yes
2	**(U-2)** تنصیبِ جنین اور ابتدائی مرحلہ ارتقاء Implantation & early embryonic development	Yes	Yes	Yes
3	**(U-3)** زنانہ اعضاءِ تولید کے خلقی نقائص Anomalies in genital tract development	Yes	Yes	Yes

4	(U-4) تکوینِ مشیمہ، ارتقاءِ جنین اور دوران ولادت واقع ہونے والے تغیرات Placenta formation & fetal development and growth and changes at birth	Yes	Yes	No
5	(U-5) رضاعت کا طبعی بیان Physiology of Lactation	Yes	Yes	Yes
(M- 4) بلوغت، حمل، وضع حمل، نفاس اور انقطاع حیض کے دوران زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحاتی تغیرات Physiological and anatomical changes in female genital tract during puberty, Pregnancy, Labour,Puerperium and menopause (Marks: Range 5-20)				
1	(U-1) دوران بلوغت و مراھقہ زنانہ اعضاءِ تناسلیہ میں لاحق ہونے والے منافع الاعضائی و تشریحاتی تغیرات Physiological and anatomical changes in female genital tract during puberty and adolescence	Yes	Yes	Yes
2	(U-2) دوران حمل اور وضع حمل زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحاتی تغیرات Physiological and anatomical changes in female genital tract during Pregnancy and Partum	Yes	Yes	Yes
3	(U-3) دوران نفاس زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحاتی تغیرات Physiological and anatomical changes in female genital tract during Puerperium	Yes	Yes	No
4	(U-4) محیطِ سنواتِ انقطاع حیض اور انقطاع حیض کے دوران زنانہ اعضاءِ تناسلیہ میں پیدا ہونے والے منافع الاعضائی و تشریحاتی تغیرات Physiological and anatomical changes in female genital tract during climacteric and menopause.	Yes	Yes	Yes
(M- 5) نظامِ تولید زنانہ سے متعلق نظام لاقناتی Endocrinology related to female reproductive system (Marks: Range 5-20)				
1	(U-1) زیرعرشی۔غدہ نخاعیہ۔ مبیضین کے سبیل کا منافع الاعضائی بیان Physiology of Hypothalamo-Pituitary-Ovarian Axis	Yes	Yes	Yes
2	(U-2) تولیدی ہارمون کے افعال Role of reproductive Hormones	Yes	Yes	Yes
3	(U-3) مشیماتی ہارمون Placental Hormones	No	Yes	No
(M- 6) امراض نسواں و قبالہ کے مبادیات اور ان میں مستعمل یونانی اصول و ضوابط Unani fundamental principles applied in Amrāze Niswān wa Qabālat (Marks: Range 5-20)				

1	**(U-1)** اعضاء تناسلیہ سے متعلق امور طبیعیہ کی اہمیت Importance of Umūr Ṭabī'iyya concerning A'da' Tanasuliyya	No	Yes	Yes
2	**(U-2)** کلیاتِ امراض نسواں و قبالہ اور اس کے اسباب، اغراض و اقسام Kulliyāt Amraze Niswan wa Qabalat wa Asbāb-o-Aghrāz wa Aqsaam	Yes	Yes	No
3	**(U-3)** زنانہ اعضاء تناسلیہ کی صحت میں اسباب ستہ ضروریہ و غیر ضروریہ کی اہمیت Asbāb Sitta Zaruriyya wa ghair Zaruriyya in female reproductive health	Yes	Yes	Yes
(M- 7) امراض نسواں و قبالہ میں مستعمل خلوی و نسیجی تشریح Cytology and Histopathology in Amrāze Niswān wa Qabālat (Marks: Range 5-20)				
1	**(U-1)** امراض نسواں و قبالہ میں مستعمل خلوی تشریح Cytology in Amrāze Niswān wa Qabālat	Yes	Yes	Yes
2	**(U-2)** امراض نسواں و قبالہ میں مستعمل نسیجی تشریح Histopathology in Amrāze Niswān wa Qabālat	Yes	Yes	No
(M- 8) امراض نسواں و قبالہ میں علم احیاء دقیقہ، کیمیاء حیاتی اور علم الجینیات کا بیان Clinical Microbiology, Applied Biochemistry and Applied Medical Genetics in Amrāze Niswān wa Qabālat (Marks: Range 5-20)				
1	**(U-1)** امراض نسواں و قبالہ میں سریریاتی و اطلاقی علم احیاء دقیقہ کا بیان Clinical microbiology applied to investigations for Amrāze Niswān wa Qabālat	Yes	Yes	Yes
2	**(U-2)** اطلاقی حیاتیاتی کیمیاء (اعضاء تولید زنانہ کی صحت و مرض کی حیاتیاتی کیمیائی اساس) Applied Biochemistry (Biochemical basis of female reproductive health and diseases)	Yes	Yes	No
3	**(U-3)** امراض نسواں و قبالہ سے متعلق اطلاقی طبی جینیات کا بیان applied Medical Genetics in Amrāze Niswān wa Qabālat	Yes	Yes	Yes

6 G : Instruction for the paper setting & Blue Print for Summative assessment (University Examination)

Instructions for the paper setting.

1. 100 marks question paper shall contain:-
• Application Based Question: 1 No (carries 20 marks)
• Short Answer Questions: 8 Nos (each question carries 05 marks)
• Long Answer Questions: 4 Nos (each question carries 10 marks)
2. Questions should be drawn based on the table 6F.
3. Marks assigned for the module in 6F should be considered as the maximum marks. No question shall be asked beyond the maximum marks.
4. Refer table 6F before setting the questions. Questions should not be framed on the particular unit if indicated “NO”.
5. There will be a single application-based question (ABQ) worth 20 marks. No other questions should be asked from the same module where the ABQ is framed.
6. Except the module on which ABQ is framed, at least one Short Answer Question should be framed from each module.
7. Long Answer Question should be analytical based structured questions assessing the higher cognitive ability.
8. Use the Blueprint provided in 6G or similar Blueprint created based on instructions 1 to 7

Blueprint		
Question No	**Type of Question**	**Question Paper Format**
Q1	**Application based Questions** 1 Question 20 marks All compulsory	M1.U2 **Or** M1.U3 **Or** M1.U4 **Or** M1.U5 **Or** M2.U1 **Or** M2.U2 **Or** M2.U3 **Or** M2.U4 **Or** M3.U1 **Or** M3.U2 **Or** M3.U3 **Or** M3.U4 **Or** M3.U5 **Or** M5.U1 **Or** M5.U2 **Or** M4.U1 **Or** M4.U2 **Or** M4.U3 **Or** M4.U4 **Or** M6.U2 **Or** M6.U3 **Or** M7.U1 **Or** M7.U2 **Or** M8.U1 **Or** M8.U2 **Or** M8.U3
Q2	**Short answer Questions** Eight Questions 5 Marks Each All compulsory	1. M1.U1 **Or** . M1.U2 **Or** . M1.U3 **Or** . M1.U4 **Or** . M1.U5 2. M2.U1 **Or** . M2.U2 **Or** . M2.U3 **Or** . M2.U4 3. M3.U1 **Or** . M3.U2 **Or** . M3.U3 **Or** . M3.U4 **Or** . M3.U5 4. M4.U1 **Or** . M4.U2 **Or** . M4.U3 **Or** . M4.U4 5. M5.U1 **Or** . M5.U2 **Or** . M5.U3 6. M6.U1 **Or** . M6.U2 **Or** . M6.U3 7. M7.U1 **Or** . M7.U2 8. M8.U1 **Or** . M8.U2 **Or** . M8.U3
Q3	**Analytical Based Structured Long answer Questions** Four Questions 10 marks each All compulsory	1. M1.U1 **Or** . M1.U2 **Or** . M1.U3 **Or** . M1.U4 **Or** . M1.U5 **Or** . M5.U1 **Or** . M5.U2 **Or** . M5.U3 2. M2.U1 **Or** . M2.U2 **Or** . M6.U1 **Or** . M6.U2 **Or** . M6.U3 3. M3.U1 **Or** . M3.U2 **Or** . M3.U3 **Or** . M3.U5 **Or** . M7.U1 **Or** . M7.U2 4. M4.U1 **Or** . M4.U2 **Or** . M4.U3 **Or** . M4.U4 **Or** . M8.U1 **Or** . M8.U2 **Or** . M8.U3

6 H : Distribution of Practical Exam (University Examination)

S.No	Heads	Marks
1	**Long Cases / Practical Procedures / Major Practical:** one (01) ; 01hour and 30 minutes Total marks :80 Marks disrtribution 1. History Taking – 10 marks 2. General Physical Examination – 5 marks 3. Systemic & Pelvic Examination – 10 marks 4. Provisional & Differential Diagnosis – 10 marks 5. Relevant Investigations & Interpretation – 10 marks 6. Clinical Reasoning & Case Analysis – 10 marks 7. Management Plan (Medical/Surgical) – 10 marks 8. Recent Advances/Guidelines – 5 marks 9. Communication & Counseling Skills – 5 marks 10. Overall Presentation & Viva – 5 marks **Long Cases / Practical Procedures / Major Practical names** 1. Pelvic examination 2. Pelvic Organ Prolapse 3. Antenatal Case 4. Postpartum Case 5. Rh Incompatibility 6. Pelvic Inflammatory Disease Case 7. Recurrent abortion 8. Polycystic syndrome Case 9. Gestational Diabetes 10. Thyroid Disorder in Pregnancy 11. Endometrial Biopsy 12. Ovarian Mass 13. Placental Pathology. 14. HPV/Cervical Cytology 15. Prenatal Screening 16. ART (Assisted reproductive technology) 17. TORCH infections in pregnancy (Toxoplasmosis, Rubella, Cytomegalovirus, Herpes) 18. Post-menopausal syndrome	80
2	**Short case or procedure/Minor practical *as applicable** Total duration: 45 minutes (i) Short case (01 number; 20 marks) (ii) Spotters or specimens (08 numbers - 08x05 =40 marks) Short Cases / Procedures / Practical 1. Short Case – Total 20 Marks Marks distribution	60

	1. History & Case Approach – 4 marks 2. Examination Technique / Procedure Skill – 6 marks 3. Findings & Interpretation – 4 marks 4. Diagnosis & Clinical Reasoning – 3 marks 5. Communication / Explanation to Patient – 3 marks **Short case or Procedure name:** 1. Bimanual Pelvic Examination 2. Obstetric Abdominal Examination 3. Interpretation of CTG (Cardiotocography) 4. Cervical Cytology Slide (Pap Smear) 5. Rh Typing and Coombs Test Interpretation 6. Evaluation of Vaginal Discharge 7. Assessment of a Case of Ectopic Pregnancy 8. Abnormal Uterine Bleeding (AUB) 9. Management of urinary incontinence 10. Cervical Insufficiency in Pregnancy **2. Spotters** Marks distribution (8x5) 5 marks/spotter 1. Identification - 1 mark 2. Anatomy / Structure / Component – 1 mark 3. Function / Use / Procedure – 1 mark 4. Clinical Significance / Indication – 1 mark 5. Complication / Contraindication / Interpretation – 1 mark **Spotters name** 1. Intrauterine contraceptive device (IUCDs) 2. Uterine fibroid specimen (gross pathology) 3. CTG interpretation 4. Fetal skull and maternal pelvis 5. Cervical effacement model 6. Bishop's Score and its clinical significance. 7. Fetal Doppler. 8. Hydatidiform mole specimen 9. Ultrasound image 10. Obstetric forceps. 11. Placental Specimen 12. Gynecological instruments. 13. HIV Testing Kit or Report 14. Endometrial Biopsy Curette 15. TORCH Profile Report 16. Hormone Assay Report (e.g., TSH, Prolactin, LH/FSH)	
3	Viva (2 examiners: 20 marks/each examiner)	40
4	Logbook (Activity record)	10
5	Practical / Clinical Record (10)	10
Total Marks		**200**

Reference Books/ Resources

S.No	References
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Abbreviations

Domain		T L Method		Level	
CK	Cognitive/Knowledge	L	Lecture	K	Know
CC	Cognitive/Comprehension	L&PPT	Lecture with PowerPoint presentation	KH	Knows how
CAP	Cognitive/Application	L&GD	Lecture & Group Discussion	SH	Shows how
CAN	Cognitive/Analysis	L_VC	Lecture with Video clips	D	Does
CS	Cognitive/Synthesis	REC	Recitation		
CE	Cognitive/Evaluation	SY	Symposium		
PSY-SET	Psychomotor/Set	TUT	Tutorial		
PSY-GUD	Psychomotor/Guided response	DIS	Discussions		
PSY-MEC	Psychomotor/Mechanism	BS	Brainstorming		
PSY-ADT	Psychomotor Adaptation	IBL	Inquiry-Based Learning		
PSY-ORG	Psychomotor/Origination	PBL	Problem-Based Learning		
AFT-REC	Affective/ Receiving	CBL	Case-Based Learning		
AFT-RES	Affective/Responding	PrBL	Project-Based Learning		
AFT-VAL	Affective/Valuing	TBL	Team-Based Learning		
AFT-SET	Affective/Organization	TPW	Team Project Work		
AFT-CHR	Affective/ characterization	FC	Flipped Classroom		
		BL	Blended Learning		
		EDU	Edutainment		
		ML	Mobile Learning		
		ECE	Early Clinical Exposure		
		SIM	Simulation		
		RP	Role Plays		
		SDL	Self-directed learning		
		PSM	Problem-Solving Method		
		KL	Kinaesthetic Learning		
		W	Workshops		
		GBL	Game-Based Learning		
		LS	Library Session		
		PL	Peer Learning		

		RLE	Real-Life Experience		
		PER	Presentations		
		D-M	Demonstration on Model		
		PT	Practical		
		X-Ray	X-ray Identification		
		CD	Case Diagnosis		
		LRI	Lab Report Interpretation		
		DA	Drug Analysis		
		D	Demonstration		
		D-BED	Demonstration Bedside		
		DL	Demonstration Lab		
		DG	Demonstration Garden		
		FV	Field Visit		
		JC	Journal Club		
		Mnt	Mentoring		
		PAL	Peer Assisted Learning		
		C_L	Co Learning		