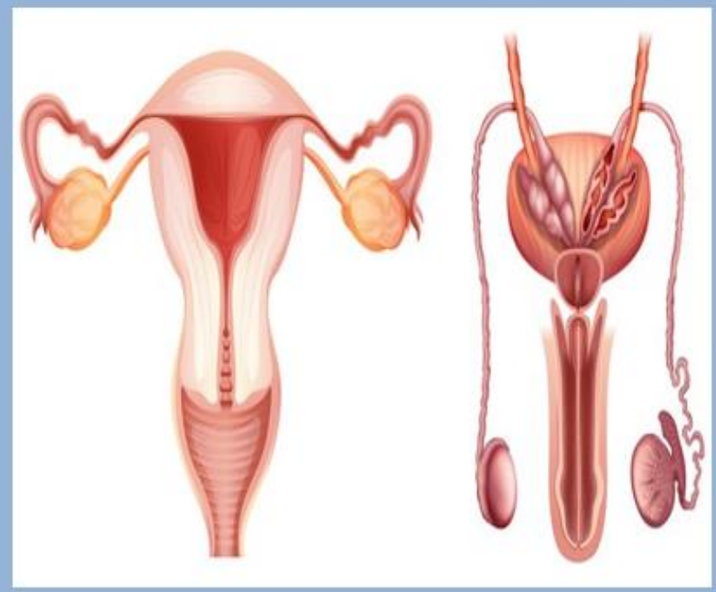
Department of Medical Education (DME)

Reproduction Module

Study Guide

Second Year MBBS 2022 - 2023



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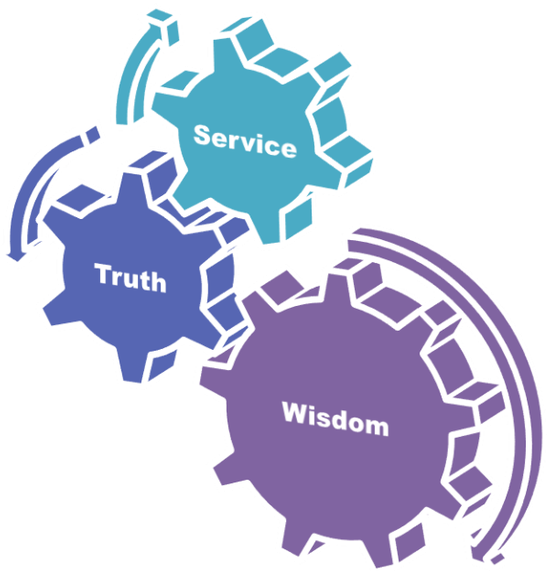
University Moto, Vision, Values & Goals

RMU Motto



Mission Statement

To impart evidence-based research-oriented health professional education in order to provide best possible patient care and inculcate the values of mutual respect, ethical practice of healthcare and social accountability.

Vision and Values

Highly recognized and accredited centre of excellence in Medical Education, using evidence-based training techniques for development of highly competent health professionals, who are lifelong experiential learner and are socially accountable.

Goals of the Undergraduate Integrated Modular Curriculum

The Undergraduate Integrated Learning Program is geared to provide you with quality medical education in an environment designed to:

- Provide thorough grounding in the basic theoretical concepts underpinning the practice of medicine.
- Develop and polish the skills required for providing medical services at all levels of the health care delivery system.
- Help you attain and maintain the highest possible levels of ethical and professional conduct in your future life.
- Kindle a spirit of inquiry and acquisition of knowledge to help you attain personal and professional growth & excellence.

Second Year MBBS 2023

Study Guide

Reproduction Module

Discipline Wise Details of Modular Contents

Block	Subjects	Embryology	Histology	Gross Anatomy
1	• Anatomy	Embryology/Development • Testis • Genital Ducts • Prostate & Accessory Glands • Uterus & Uterine tubes • Ovary & Vagina	Histology • Testis • Genital Ducts • Prostate & Accessory Glands • Uterus & Uterine Tubes • Ovary & Vagina	• Sacrum • Bony Pelvis & Joints of Pelvis • Pelvic Fascia, Pelvic Diaphragm, & Pelvic Peritoneum • Male External Genitalia, Scrotum, & Testis • Prostate Vas Deferens, Seminal Vesicles & Ejaculatory Ducts • Female External Genitalia, Ovaries, Fallopian Tubes • Uterus, Cervix & Vagina • Ischioanal Fossa • Urogenital Diaphragm • Perineum, Superficial Perineal Pouch and its contents • Deep Perineal Pouch and its contents • Blood Supply & Lymphatic Drainage of Pelvis & Perineum • Sacral and Coccygeal Plexus • Radiology, Surface Marking
	• Biochemistry	• Digestion of nucleic acid & biosynthesis of purines • Purine catabolism and related disorders • Pyrimidine metabolism • Regulation of gene expression • Male Gonadal Hormones • Female Gonadal Hormones		
	• Physiology	• Physiological anatomy of male reproductive • system & spermatogenesis • Physiological anatomy female reproductive system • Semen, capacitation & acrosome reaction • Monthly Ovarian Cycle, ovulation • Male sex hormones, Abnormalities of male sexual • function and spermatogenesis • Monthly Endometrial Cycle and Menstruation • Response of mother's body to pregnancy and parturition • Female sex hormones (oestrogen and progesterone) • Lactation, Milk composition, breast feeding		

		• Puberty, menarche, menopause, postmenopausal symptoms & anovulatory cycles, Abnormalities of • secretion by ovaries • Growth &functional development of fetus, Adjustments of infant to extrauterine life, Growth • & development in child • Fertilization of ovum, transport, implantation, Functions of placenta • Hormonal factors in pregnancy, Special functional • problems in neonate. Prematurity and its problems
	• Bioethics & Professionalism	• Ethical dilemmas Involving breech in Autonomy • Ethical dilemmas in healthcare practice involving breach in principle of beneficence and non-maleficence • Ethical dilemmas practice involving breach in principle of justice
	• Research Club Activity	• Orientation to SPSS software • How to make variables
	• Vertical components	• The Holy Quran Translation Component
	• Vertical Integration	Clinically Content Relevant To Reproduction Module • Male Hypogonadism Acute Scrotum (Surgery) • Undescended Testes (Surgery) • Sexually Transmitted Diseases/ BPH/Prostatitis (Pathology) • BPH/Prostatitis / Sexually Transmitted Diseases (Pathology) • Polycystic Ovaries (Pathology) • Menstrual Irregularities (Gynae & Obs) • Acquired Immunodeficiency Syndromes/ Sexually Transmitted Diseases (Community Medicine)

Table of Contents

Reproduction Module Team

Module Name	:	Reproduction Module
Duration of module	:	04 Weeks
Coordinator	:	Dr. Isma Riaz
Co-coordinator	:	Dr. Nayab Ramzan
Reviewed by	:	Module Committee

Module Committee		
1.	Vice Chancellor RMU	Prof. Dr. Muhammad Umar
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3.	Convener Curriculum	Prof. Dr. Naeem Akhter
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9.	Focal Person Physiology	Dr. Sidra Hamid
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12.	Focal Person Pathology	Dr. Asiya Niazi
13.	Focal Person Behavioral Sciences	Dr. Saadia Yasir
14.	Focal Person Community Medicine	Dr. Afifa Kulsoom
15.	Focal Person Quran Translation Lectures	Dr. Fahad Anwar

Module Task Force Team		
1.	Coordinator	Dr. Isma Riaz (Senior Demonstrator of Biochemistry)
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3.	Co-coordinator	Dr. Gaiti Ara (APWMO)
4.	Co-Coordinator	Dr. Nayab Ramzan (Senior Demonstrator of Biochemistry)
5.	Co-coordinator	Dr. Kamil Tahir (Senior Demonstrator of Physiology)

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2.	Implementation Incharge 1st & 2nd Year MBBS & Add. Director DME	Prof. Dr. Ifra Saeed
3.	Deputy Director DME	Dr Shazia Zaib
4.	Module planner & Implementation coordinator	Dr. Sidra Hamid
5.	Editor	Muhammad Arslan Aslam

Module III – Reproduction Module

Rationale: Reproductive system plays an important role in person life although it does not contribute to homeostasis and is not essential for the survival of individual e.g. the manner in which people relate as sexual beings contributes in significant ways to psycosocial behavior and has an important influence on how people view themselves and how they interact with others. Reproductive function also has profound effect on society. The universal organization of societies into family units provide a stable environment that is condusive for perpetuating our species.

Module Outcomes

By the end of the module, students will be able to:

Knowledge

- This module is expected to build students basic knowledge about normal structure, organization, functions and development of reproductive system.
- Used technology based Medical Education including
  Artificial Intelligence
- Appreciate concept and importance of
  - **Family Medicine**
  - **Biomedical Ethics**
  - **Research**

Skills

- Demonstrate effective skill for performing and interpreting various laboratory tests like pregnancy test.
- Demostrate awareness of ethical, legal and social implecation of issues related to bioethics

Attitude

- Demonstrate **professional attitude, team building spirit and good communication** specially in small group discussions.

This module will run in 4 weeks duration. Instructional strategies are given in the time table and learning objectives are given in the study guides. Study guides will be uploaded on the university website. Good luck!

SECTION - I

Terms & Abbreviations

Contents

Tables & Figures

Table1. Domains of Learning According to Blooms Taxonomy

Sr. #	Abbreviation	Domains of learning
1.	C	**Cognitive Domain:** knowledge and mental skills.
	• C1	Remembering
	• C2	Understanding
	• C3	Applying
	• C4	Analyzing
	• C5	Evaluating
	• C6	Creating
2.	P	**Psychomotor Domain:** motor skills.
	• P1	Imitation
	• P2	Manipulation
	• P3	Precision
	• P4	Articulation
	• P5	Naturalization
3.	A	**Affective Domain:** feelings, values, dispositions, attitudes, etc
	• A1	Receive
	• A2	Respond
	• A3	Value
	• A4	Organize
	• A5	Internalize

Teaching and Learning Methodologies / Strategies

Large Group Interactive Session (LGIS)

The large group interactive session is structured format of Prof Umar Model of Integrated lecture. It will the followed for delivery of all LGIS. The lecturer will introduce a topic or common clinical condition and explains the underlying phenomena through questions, pictures, videos of patients, interviews and exercises, etc. Students are actively involved in the learning process.

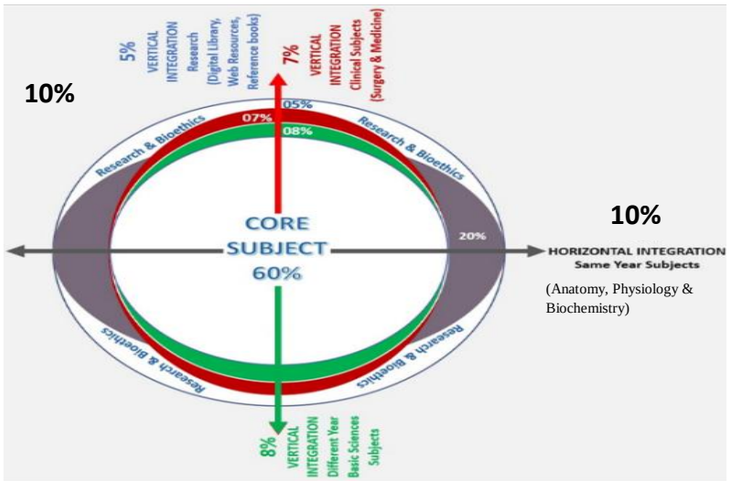


Figure 1. Prof Umar's Model of Integrated Lecture

Small Group Discussion (SGD)

This format helps students to clarify concepts acquire skills and attitudes. Sessions are structured with the help of specific exercises such as patient case, interviews or discussion topics or power point presentations. Students exchange opinions and apply knowledge gained from lectures, SGDs and self study. The facilitator role is to ask probing questions, summarize and help to clarify the concepts.

Table 2. Standardization of teaching content in Small Group Discussions

S. No	Topics	Approximate %
1	Title Of SGD	
2	Learning Objectives from Study Guides	
3	Horizontal Integration	5%+5%=10%
4	Core Concepts of the topic	60%
5	Vertical Integration	20%
6	Related Advance Research points	3%
7	Related Ethical points	2%

Table 3. Steps of Implementation of Small Group Discussions

Step 1	Sharing of Learning objectives by using students Study guides	First 5 minutes
Step 2	Asking students pre-planned questions from previous teaching session to develop co-relation (these questions will be standardized)	5minutes
Step 3	Students divided into groups of three and allocation of learning objectives	5minutes
Step 4	ACTIVITY: Students will discuss the learning objectives among themselves	15 minutes
Step 5	Each group of students will present its learning objectives	20 min
Step 6	Discussion of learning content in the main group	30min
Step 7	Clarification of concept by the facilitator by asking structured questions from learning content	15 min
Step 8	Questions on core concepts	
Step 9	Questions on horizontal integration	
Step 10	Questions on vertical integration	
Step 11	Questions on related research article	
Step 12	Questions on related ethics content	
Step 13	Students Assessment on online MS teams (5 MCQs)	5 min
Step 14	Summarization of main points by the facilitator	5 min
Step 15	Students feedback on the SGD and entry into log book	5 min
Step 16	Ending remarks	

Self-Directed Learning (SDL)

- Self- directed learning is a process where students take primary charge of planning, continuing, and evaluating their learning experiences.
- Time Home assignment
- Learning objectives will be defined
- Learning resources will be given to students = Textbook (page no), web site
- Assessment:

  i Will be online on LMS (Mid module/ end of Module)

  ii.OSPE station

Case Based Learning (CBL)

- It's a learner centered model which engages students in discussion of specific scenarios that typically resemble real world examples.
- Case scenario will be given to the students
- Will engage students in discussion of specific scenarios that resemble or typically are real-world examples.
- Learning objectives will be given to the students and will be based on
  i. To provide students with a relevant opportunity to see theory in practice
  ii. Require students to analyze data in order to reach a conclusion.
  iii. Develop analytic, communicative, and collaborative skills along with content knowledge.

Problem Based Learning (PBL)

- Problem-based learning (PBL) is a student-centered approach in which students learn about a subject by working in groups to solve an open-ended problem.
- This problem is what drives the motivation and the learning.

The 7- Jump-Format of PBL (Masstricht Medical School)	
Step 7	Synthesize & Report
Step 6	Collect Information from outside
Step 5	Generate learning Issues
Step 4	Discuss and Organize Ideas
Step 3	Brainstorming to Identify Explanations
Step 2	Define the Problem
Step 1	Clarify the Terms and Concepts of the Problem Scenario
Problem- Scenario	

Figure 2. PBL 7 Jumps Model

Practical Sessions/Skill Lab (SKL)

Practical Session/ Skill Lab (SKL)	
Demonstration/ power point presentation 4-5 slide	10-15 minutes
Practical work	25-30 minutes
Write/ draw and get it checked by teacher	20-25 minutes
05 mcqs at the end of the practical	10 minutes
At the end of module practical copy will be signed by head of department	
At the end of block the practical copy will be signed by Head of Department Dean Medical education department QEC	

SECTION – II

Learning Objectives, Teaching Strategies & Assessments

Contents

- Horizontally Integrated Basic Sciences (Anatomy, Physiology & Biochemistry)
- Large Group Interactive Session:
  - Anatomy (LGIS)
  - Physiology (LGIS)
  - Biochemistry (LGIS)
- Small Group Discussions
  - Anatomy (SGD)
  - Physiology (SGD)
  - Biochemistry (SGD)
- Self-Directed Topic, Learning Objectives & References
  - Anatomy (SDL)
  - Physiology (SDL)
  - Biochemistry (SDL)
- Skill Laboratory
  - Anatomy
  - Physiology
  - Biochemistry

Horizontally Integrated Basic Sciences (Anatomy, Physiology & Biochemistry)

Anatomy Large Group Interactive Session (LGIS)

Topics	At The End Of Lecture Students Should Be Able To:	Learning Domains	Teaching Strategy	Assessment Tools
Development of testis	• Recall the time of early sex differentiation and genes involved in it. • Explain the development of male gonads and formation of testis. • Describe the descent of testis. • Describe the concepts of chromosomal determination of sex, primordial germ cells and indifferent gonads. • Describe histogenesis of interstitial cells of leydig and seminiferous tubules • Read a relevant research article • Use digital library	C1 C2 C2 C2 C2 C3 C3	LGIS	• MCQS • SAQS • VIVA
Histology of Testis	• Discuss germ cells at different steps of spermatogenesis in the seminiferous tubule. • Describe histology of Sertoli cells and Leydig cells. • Explain their roles in the production of sperm and regulation of the male reproductive system • Understand the bio-physiological aspects of spermatogenesis • Discuss the related clinicals like orchitis, male infertility, testicular cancers, cryptorchidism • Read a relevant research article • Use Digital Library	C2 C2 C2 C2 C3 C3 C3	LGIS	• MCQS • SAQS • VIVA
Histology of male genital ducts	• Describe the histological organization of epididymis, ductus deferens and ejaculatory ducts • Describe the epithelium and microscopic features of epididymis, ductus deferens and ejaculatory ducts • Understand the bio-physiological aspects of epithelium of ducts • Discuss the related clinicals like vasectomy, epididymitis • Read a relevant research article • Use Digital Library	C1 C1 C2 C3 C3 C3	LGIS	• MCQS • SAQS • VIVA
	• Describe the development of male genital ducts during indifferent stage	C2		• MCQS

Development of male genital ducts, Seminal vesicles and prostate	• Discuss development of male genital ducts at advanced stage • Describe the molecular regulation of male genital ducts • Describe the development of seminal vesicles • Discuss the development of prostate • Discuss the remnants of mesonephric and paramesonephric ducts in males and their clinical significance • Read a relevant research article • Use Digital library	C2 C2 C2 C2 C3 C3 C3	LGIS	• SAQS • VIVA
Histology of accessory male reproductive glands	• Describe the histological organization of prostate gland, seminal vesicles and bulbourethral glands • Describe microscopic features of these glands • Discuss the related clinicals like prostatitis • Read a relevant research article • Use Digital Library	C1 C1 C3 C3 C3	LGIS	• MCQS • SAQS • VIVA
Development of male external genitalia	• Explain the different stages and further development of external genitalia. • Discuss the related clinical like ambiguous genitalia, Androgen insensitivity syndrome, hypospadias, epispadias, bifid penis, micropenis • Read a relevant research article • Use digital library	C2 C3 C3 C3	LGIS	• MCQS • SAQS • VIVA
Histology of uterus and uterine tubes	• Recollect knowledge of histological features of endometrium in various phases • Discuss microanatomy of layers of uterus • Describe parts of uterine tubes • Explain microscopic features of all parts of uterine tubes • Dicuss the related clinicals like endometriosis, tubal ligation, salpingitis, and cervical cancers • Read a relevant research article • Use Digital Library	C1 C1 C1 C2 C3 C3 C3	LGIS	• MCQS • SAQS • VIVA
Development of uterus and uterine tubes	• Describe role of paramesonephric ducts, uterovaginal primordium in development of uterine tubes • Discuss the role of paramesonephric ducts, uterovaginal primordium in development of uterus • Discuss the related clinicals like bicornuate uterus, unicornuate uterus, double uterus	C2 C2 C3 C3	LGIS	• MCQS • SAQS • VIVA

	• Read a relevant research article • Use digital Library	C3		
Histology of Ovary and Vagina	• Discuss the stages of follicular growth (primordial, primary, secondary, tertiary), as well as the changes that occur in the follicular wall • Discuss ovarian cycle and menstrual cycle • Describe the histological features of corpus luteum of mensuration and pregnancy • Discuss the related clinicals like PCOS, Follicular cyst, hemorrhagic cyst • Discuss histological structure of vagina • Understand the bio-physiological aspects of vaginal epithelial cells • Discuss the related clinical like vaginitis, squamous cell carcinoma of vagina • Read a relevant research article • Use Digital Library	C1 C1 C2 C3 C2 C2 C3 C3 C3	LGIS	• MCQS • SAQS • VIVA
Development of Ovary	• Recall the process of oogenesis in female. • Explain the different steps involved in early oogenesis. • Explain the ovarian and menstrual cycle and phases. • Explain the hormonal changes occurring during reproductive cycle. • Describe role of paramesonephric ducts, uterovaginal primordium in development of ovary • Describe the descent of ovaries. • Read a relevant research article • Use digital library	C1 C1 C1 C1 C2 C2 C3 C3	LGIS	• MCQS • SAQS • VIVA
Development of Vagina	• Discuss the developmental stages of vagina and female external genitalia • Enlist different congenital anomalies of female reproductive system. • Describe different syndromes and gene defects associated with congenital anomalies • Read a relevant research article • Use digital library	C1 C1 C3 C3 C3	LGIS	• MCQS • SAQS • VIVA

Physiology Large Group Interactive Session (LGIS)

Topics	At the end of lecture students should be able to:	Learning Domains	Teaching Strategy	Assessment Tools
Physiological anatomy of male reproductive system & spermatogenesis	• Describe Physiological anatomy of male reproductive system • Explain the steps of spermatogenesis • Identify the process of meiosis • Describe the hormonal factors that stimulate spermatogenesis • Describe functions of seminal vesicles	C2 C2 C2 C2 C2	LGIS	MCQ SEQ VIVA
Physiological anatomy female reproductive system	• Describe oogenesis & follicular development in ovaries • Discuss female hormonal system	C2 C2	LGIS	MCQ SEQ VIVA
Semen, capacitation & acrosome reaction	• Explain capacitation • Describe acrosomal reaction • Summarize the abnormalities related to spermatogenesis: ➢ Bilateral orchitis ➢ Effects of temperature ➢ Cryptorchidism	C2 C2 C2	LGIS	MCQ SEQ VIVA
Monthly Ovarian Cycle, ovulation	• Describe gonadotropic hormones & their effects on ovaries • Explain follicular phase of ovarian cycle • Explain ovulation hormones • Explain LH surge • Describe luteinizing function of Luteinizing	C2 C2 C2 C2 C2	LGIS	MCQ SEQ VIVA
Male sex hormones, Abnormalities of male sexual function and spermatogenesis system	• Describe male sex hormone's (secretion, metabolism, chemistry, degradation and excretion) • Explain functions of testosterone in detail • Describe: ➢ Hypogonadism in males ➢ Interstitial Leydig cell tumors ➢ Erectile dysfunction in males	C2 C2 C2	LGIS	MCQ SEQ VIVA

Monthly Endometrial Cycle and Menstruation	• Explain monthly endometrial cycle • Explain menstruation & physiological changes in endometrium	C2 C2	LGIS	MCQ SEQ VIVA
Response of mother's body to pregnancy, Parturition	• Explain: ➢ Anterior pituitary gland secretion ➢ Increased corticosteroid secretion ➢ Increased thyroid gland secretion ➢ Increased parathyroid gland secretion • Explain increased uterine excitability near term • Explain hormonal factors increasing uterine contractility • Discuss mechanical factors increasing uterine contractility • Explain the physiological mechanism of labour	C2 C2 C2 C2 C2	LGIS	MCQ SEQ VIVA
Female sex hormones (estrogen and progesterone)	• Explain: ➢ Functions of estradiol & progesterone ➢ Chemistry of sex hormones ➢ Synthesis of estrogen & progesterone	C2	LGIS	MCQ SEQ VIVA
Lactation, Milk composition, breast feeding	• Explain development of breasts • Explain hormonal control of breast development • Describe the role of prolactin in lactation • Explain: ➢ Milk let down reflex ➢ Milk composition ➢ Metabolic drain in mother caused by lactation	C2 C2 C2 C2	LGIS	MCQ SEQ VIVA
Puberty, menarche, menopause, postmenopausal symptoms & anovulatory cycles, Abnormalities of	• Discuss the physiology of: ➢ Puberty ➢ Menarche ➢ Menopause Explain hypogonadism • Describe amenorrhea • Describe hyper secretion by ovaries	C2 C2 C2	LGIS	MCQ SEQ VIVA

secretion by ovaries				
Fertilization of ovum, transport, implantation Functions of placenta	• Describe: ➢ Entry of ovum into fallopian tube ➢ Transport of fertilized ovum ➢ Implantation of blastocyst ➢ Early nutrition of embryo • Describe physiological anatomy of placenta • Explain placental permeability • Explain diffusion of gases & excretion of waste products	C2 C2 C2 C2	LGIS	MCQ SEQ VIVA
Growth &functional development of fetus, Adjustments of infant to extrauterine life, Growth & development in child	• Describe development of organ system in fetus • Explain fetal metabolism	C2 C2	LGIS	MCQ SEQ VIVA
Hormonal factors in pregnancy, Special functional problems in neonate. Prematurity and its problems	• Explain functins of B- HCG • Describe secretion of estrogens by the placenta • Summarize function of estrogen in pregnancy • Summarize function of progesterone in pregnancy • Explain onset of breathing • Describe the cause of breathing at birth • Explain delayed / abnormal breathing at birth • Describe changes to hypoxia	C2 C2 C2 C2 C2 C2 C2 C2	LGIS	MCQ SEQ VIVA

Biochemistry Large Group Interactive Session (LGIS)

Topics	At the end of lecture students should be able to:	Learning Domains	Teaching Strategy	Assessment Tools
Male gonadal hormones	• Synthesis mechanism of action and functions of male gonadal hormones	C2	LGIS	MCQ SEQ VIVA
Female gonadal hormones	• Synthesis mechanism of action and functions of female gonadal hormones	C2	LGIS	MCQ SEQ VIVA
Digestion of nucleic acid and purine synthesis	• Explain digestion of nucleoprotein • Describe purine biosynthesis (Denovosynthesis and salvage pathway)	C2 C2	LGIS	MCQ SEQ VIVA
Purine catabolism and related disorders	• Explain purine catabolism • Discuss related disorders	C2 C3	LGIS	MCQ SEQ VIVA
Pyrimidine metabolism	• Explain Pyrimidine catabolism • Related disorders	C2 C3	LGIS	MCQ SEQ VIVA
Regulation of gene expression	• Explain the regulation of gene expression	C2	LGIS	MCQ SEQ VIVA

Anatomy Small Group Discussion (SGDs)

Topics	At The End Of Demonstration Student Should Be Able To	Learning Domains	Teaching Strategy	Assessment Tools
Sacrum	• Identify the bone • Place the bone in anatomical position • Demonstrate anatomical features on bone • Discuss attachments and relations on bone • Discuss important clinical anatomy of bone • Read a relevant research article • Use digital library	C2 P P C2 C3 C3 C3	Skill Lab	• OSPE • VIVA
Bony pelvis	• Identify type of pelvis • Place pelvis in anatomical position • Demonstrate different diameters of each type • Differentiate bony features of each type • Clinical importance of each type • Read a relevant research article • Use digital library	C2 P P C1 C3 C3 C3	Skill Lab	• OSPE • VIVA
Pelvic Peritoneum and its contents	• Identify visceras present in pelvis • Demonstrate peritoneal reflections on pelvic visceras • Discuss pouches formed by peritoneum • Discuss clinical anatomy of pelvic peritoneum and pelvic visceras • Read a relevant research article • Use digital library	C2 P C1 C3 C3 C3	Skill Lab	• OSPE • VIVA
Pelvic diaphragm	• Identify the muscles forming pelvic diaphragm • Demonstrate the attachments and nerve supply of muscles of pelvic diaphragm • Locate the structures piercing the pelvic diaphragm • Discuss clinical anatomy of pelvic diaphragm • Read a relevant research article • Use digital library	C2 P C2 C3 C3 C3	Skill Lab	• OSPE • VIVA

Male external genitalia	• Identify the anatomical structures of external genitalia • Demonstrate anatomical position of testis • Enlist layers of scrotum with its neurovasculature • Discuss clinical anatomy of scrotum • Read a relevant research article • Use digital library	C2 P C1 C3 C3 C3	Skill Lab	• OSPE • VIVA
Testis	• Identify the structure • Demonstrate anatomical position of testis • Discuss layers and structure of testis • Discuss important clinical anatomy related to testis • Read a relevant research article • Use digital library	C2 P C1 C3 C3 C3	Skill Lab	• OSPE • VIVA
Male genital ducts	• Describe the anatomical position of vas deferens, seminal vesicles, ejaculatory ducts on model • Discuss the anatomical relations of vas deferens, seminal vesicles, ejaculatory ducts • Discuss clinical anatomy • Read a relevant research article • Use digital library	C2 C2 C3 C3 C3	Skill Lab	• OSPE • VIVA
Prostate	• Identify the position of prostate • Demonstrate the anatomical features and relations of prostate • Discuss clinical anatomy • Read a relevant research article • Use digital library	C2 P C3 C3 C3	Skill Lab	• OSPE • VIVA
Ovaries	• Identify the site of ovarian fossa • Discuss anatomical relations of ovary • Discuss neurovasculature and hormonal effects of ovaries • Discuss important clinical anatomy of ovary • Read a relevant research article • Use digital library	C2 C1 C1 C3 C3 C3	Skill Lab	• OSPE • VIVA

Fallopian tubes, Uterus	• Identify the location of structures in pelvis • Demonstrate anatomical relations of these structures • Discuss normal positions of uterus with its ligaments • Discuss its neurovasculature • Discuss important clinical anatomy of fallopian tubes, uterus and uterine tube • Read a relevant research article • Use digital library	C2 P C1 C1 C3 C3 C3	Skill Lab	• OSPE • VIVA
Cervix	• Discuss anatomy of cervix • Describe anatomical relations of cervix • Describe its neurovasculature • Read a relevant research article • Use digital library	C1 C2 C2 C3 C3	Skill Lab	• OSPE • VIVA
Ischio-anal fossa	• Discuss the dimensions, boundaries and recesses • Describe the contents of Ischio anal fossa • Describe pudendal canal and its contents • Discuss important clinical anatomy of structures • Read a relevant research article • Use digital library	C1 C2 C2 C3 C3 C3	Skill Lab	• OSPE • VIVA
Urogenital diaphragm	• Discuss the formation of diaphragm • Identify the relations and contents of diaphragm • Discuss organs piercing urogenital diaphragm • Discuss important clinical anatomy related to diaphragm • Read a relevant research article • Use digital library	C1 C2 C1 C3 C3 C3	Skill Lab	• OSPE • VIVA
Perineum & Superficial perineal pouches	• Identify boundaries and divisions of perineum • Discuss formation of perineal pouches • Discuss in detail the contents of superficial perineal pouches in male and female • Discuss important clinical anatomy related to superficial perineal pouches • Read a relevant research article • Use digital library	C2 C1 C1 C3 C3 C3	Skill Lab	• OSPE • VIVA

Deep perineal pouches	• Discuss in detail the contents of deep perineal pouches in male and female • Discuss important clinical anatomy related to deep perineal pouches. • Read a relevant research article • Use digital library	C1 C3 C3 C3	Skill Lab	• OSPE • VIVA
Blood supply of pelvis and perineum	• Identify major blood vessels & nerves of pelvis and perineum • Demonstrate anatomical relationships • Describe important clinical anatomy related to blood vessels of pelvis and perineum • Read a relevant research article • Use digital library	C2 P C3 C3 C3	Skill Lab	• OSPE • VIVA
Lymphatic drainage of pelvis and perineum	• Identify major lymphatic vessels of pelvis and perineum • Discuss lymphatic drainage of pelvis and perineum • Discuss important clinical anatomy • Read a relevant research article • Use digital library	C2 C1 C3 C3 C3	Skill Lab	• OSPE • VIVA
Sacral and Coccygeal plexus	• Identify various branches of sacral and coccygeal plexus • Discuss anatomical relations • Describe root values of each branch of plexus and its related applied • Read a relevant research article • Use digital library	C2 C1 C3 C3 C3	Skill Lab	• OSPE • VIVA
Radiology and surface marking	• Describe the radiological appearance of pelvis and perineum on ➢ Normal radiographs ➢ MRI ➢ CT scan • Project deep structures of neck on surface marking i.e. ➢ Arteries ➢ Veins ➢ Viscera • Read a relevant research article • Use digital library	C2 P C3 C3	Skill Lab	• OSPE • VIVA

Physiology Small Group Discussion (SGDs)

Topics	At the end of discussion students should be able to:	Learning Domains	Teaching Strategy	Assessment Tools
Infertility	• Correlate basic knowledge with clinical application	C3	SGD/CBL	MCQ SEQ VIVA
Menorrhagia	• Correlate basic knowledge with clinical application	C3	SGD/CBL	MCQ SEQ VIVA
Contraception	• Correlate basic knowledge with clinical application	C3	SGD/CBL	MCQ SEQ VIVA

Biochemistry Small Group Discussion (SGDs)

Topics	At the end of tutorial students should be able to	Learning Domains	Teaching Strategy	Assessment Tools
Purine metabolism	• Purine denovo synthesis and describe salvage pathway • Read a relevant research article • Use digital library	C2 C3 C3	SGD	MCQ SEQ VIVA
Male female sex hormones	• Synthesis, mechanism of action and functions of male female gonadal hormones • Read a relevant research article • Use digital library	C2 C3 C3	SGD	MCQ SEQ VIVA

Anatomy Self Directed Learning (SDL)

Topics	Learning objectives	Learning Resources
Sacrum	• Identify the bone • Place the bone in anatomical position • Demonstrate anatomical features on bone • Discuss attachments and relations on bone • Discuss important clinical anatomy of bone • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 4, Page 451). • https://www.youtube.com/watch?v=93c9nlxbMUw • https://www.youtube.com/watch?v=PuOE-PI1eps
Bony pelvis	• Identify type of pelvis • Place pelvis in anatomical position • Demonstrate different diameters of each type • Differentiate bony features of each type • Clinical importance of each type • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 327-337). • https://www.youtube.com/watch?v=yK-8ZwLFarc • https://www.youtube.com/watch?v=3v5AsAESg1Q • https://www.youtube.com/watch?v=3Z0XBCyXb3Y
Pelvic Peritoneum and its contents	• Identify visceras present in pelvis • Demonstrate peritoneal reflections on pelvic visceras • Discuss pouches formed by peritoneum • Discuss clinical anatomy of pelvic peritoneum and pelvic visceras • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 338-349). • https://www.youtube.com/watch?v=F2-5tX_CMlQ • https://www.youtube.com/watch?v=3Z0XBCyXb3Y
Pelvic diaphragm	• Identify the muscles forming pelvic diaphragm • Demonstrate the attachments and nerve supply of muscles of pelvic diaphragm • Locate the structures piercing the pelvic diaphragm • Discuss clinical anatomy of pelvic diaphragm • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 338-349). • https://www.youtube.com/watch?v=P3BBAMWm2Eo • https://www.youtube.com/watch?v=3Z0XBCyXb3Y

Male external genitalia	• Identify the anatomical structures of external genitalia • Demonstrate anatomical position of testis • Enlist layers of scrotum with its neurovasculature • Discuss clinical anatomy of scrotum • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 418-419). • https://www.youtube.com/watch?v=ai7MjQvenKs • https://www.youtube.com/watch?v=5eHvZ2gyR1Y • https://www.youtube.com/watch?v=N66sAZH1VA8
Testis	• Identify the structure • Demonstrate anatomical position of testis • Discuss layers and structure of testis • Discuss important clinical anatomy related to testis • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 2, Page 208-215). • https://www.youtube.com/watch?v=ai7MjQvenKs • https://www.youtube.com/watch?v=5eHvZ2gyR1Y • https://www.youtube.com/watch?v=N66sAZH1VA8
Male genital ducts	• Describe the anatomical position of vas deferens, seminal vesicles, ejaculatory ducts on model • Discuss the anatomical relations of vas deferens, seminal vesicles, ejaculatory ducts • Discuss clinical anatomy • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 376 -381). • https://www.youtube.com/watch?v=N66sAZH1VA8 • https://www.youtube.com/watch?v=ai7MjQvenKs
Prostate	• Identify the position of prostate • Demonstrate the anatomical features and relations of prostate • Discuss clinical anatomy • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 376 -381). • https://www.youtube.com/watch?v=93Ayq248u_8 • https://www.youtube.com/watch?v=ai7MjQvenKs
Ovaries	• Identify the site of ovarian fossa • Discuss anatomical relations of ovary • Discuss neurovasculature and hormonal effects on ovaries • Discuss important clinical anatomy of ovary • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 391-392). • https://www.youtube.com/watch?v=AREHaMls9Y4 • https://www.youtube.com/watch?v=2tOtIqSNqbc

Fallopian tubes, Uterus	• Identify the location of structures in pelvis • Demonstrate anatomical relations of these structures • Discuss normal positions of uterus with its ligaments • Discuss its neurovasculature • Discuss important clinical anatomy of fallopian tubes, uterus and uterine tube • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 385-390, 392-399). • https://www.youtube.com/watch?v=AREHaMls9Y4 • https://www.youtube.com/watch?v=PMI-iJwNt3Y • https://www.youtube.com/watch?v=2tOtIqSNqbc
Cervix	• Discuss anatomy of cervix • Describe anatomical relations of cervix • Describe its neurovasculature blood • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 385-390, 392-399). • https://www.youtube.com/watch?v=AREHaMls9Y4 • https://www.youtube.com/watch?v=PMI-iJwNt3Y
Ischio-anal fossa	• Discuss the dimensions, boundaries and recesses • Describe the contents of Ischio anal fossa • Describe pudendal canal and its contents • Discuss important clinical anatomy of structures • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 409-411, 416). • https://www.youtube.com/watch?v=SFq0hA3PwK4 • https://www.youtube.com/watch?v=K4K3a8UnS5M
Urogenital diaphragm	• Discuss the formation of diaphragm • Identify the relations and contents of diaphragm • Discuss organs piercing urogenital diaphragm • Discuss important clinical anatomy related to diaphragm • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 406-408). • https://www.youtube.com/watch?v=edI7knFSu_k • https://www.youtube.com/watch?v=ZaIRPhXavVg
Perineum & Superficial perineal pouches	• Identify boundaries and divisions of perineum • Discuss formation of perineal pouches • Discuss in detail the contents of superficial perineal pouches in male and female • Discuss important clinical anatomy related to superficial perineal pouches • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 402-405). • https://www.youtube.com/watch?v=GegidLpxW9A • https://www.youtube.com/watch?v=OwWk6tqsW8o

Deep perineal pouches	• Discuss in detail the contents of deep perineal pouches in male and female • Discuss important clinical anatomy related to deep perineal pouches. • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 406-409, 414). • https://www.youtube.com/watch?v=q0Ax3rLFc6M • https://www.youtube.com/watch?v=OwWk6tqsW8o
Blood supply of pelvis and perineum	• Identify major blood vessels & nerves of pelvis and perineum • Demonstrate anatomical relationships • Describe important clinical anatomy related to blood vessels of pelvis and perineum • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 350-357, 361). • https://www.youtube.com/watch?v=xYu56Luwdls • https://www.youtube.com/watch?v=o4TplbDDcj8
Lymphatic drainage of pelvis and perineum	• Identify major lymphatic vessels of pelvis and perineum • Discuss lymphatic drainage of pelvis and perineum • Discuss important clinical anatomy • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 400-402). • https://www.youtube.com/watch?v=F-Ba96V0R-c • https://www.youtube.com/watch?v=o4TplbDDcj8
Sacral and Coccygeal plexus	• Identify various branches of sacral and coccygeal plexus • Discuss anatomical relations • Describe root values of each branch of plexus and its related applied • Read a relevant research article • Use digital library	• Clinical Oriented Anatomy by Keith L. Moore.6TH Edition. (Chapter 3, Page 357-361). • https://www.youtube.com/watch?v=DZ0IL1tHNxo • https://www.youtube.com/watch?v=f7Zig8eBCqY • https://www.youtube.com/watch?v=JqUleDnXuEI

Physiology Self Directed Learning (SDL)

Topics Of SDL	Learning Objectives	Learning resources
Fertilization of ovum, transport, implantation, Functions of placenta	• Maturation and fertilization of ovum • Transport and Implantation • Early nutrition of the Embryo • Functions of Placenta	• Ganong's Review of Medical Physiology.25TH Edition. Reproductive development and Function of female reproductive system (Chapter 22, Page 410) • Physiological Basis of Medical Practice by Best & Taylor's.13th Edition. Fertilization, Pregnancy and Lactation. (Chapter 59, Page 975) • Textbook of Medical Physiology by Guyton & Hall.14th Edition. ▪ Pregnancy and Lactation. Section 14. (Chapter 83, Page 1045) ○ https://teachmephysiology.com/reproductive- system/ ○ https://my.clevelandclinic.org/health/articles/11585- conception
Growth &functional development of fetus, Adjustments of infant to extrauterine life, Growth & development in child	• Growth & functional development of fetus • Fetal Metabolism • Changes in Fetal circulation at Birth Adjustment of the Infant to the Extrauterine life	• Physiological Basis of Medical Practice by Best & Taylor's.13th Edition. Physiology of Pregnancy (Chapter 60, Page 998) • Textbook of Medical Physiology by Guyton & Hall.14th Edition. Fetal and Neonatal Physiology. Section 14. (Chapter 84, Page 1061-1065) ○ https://youtu.be/rYVGjbzmAtg ○ https://www.msdmanuals.com/home/women-s- health-issues/normal-pregnancy/stages-of-development- of-the-fetus
Hormonal factors in pregnancy, Special functional problems in neonate. Prematurity and its problems.	• Special functional problems in neonate • Prematurity • Immature development of the premature Infant • Instability of Homeostasis in Premature Infant Instability of body temperature in Infants	• Physiological Basis of Medical Practice by Best & Taylor's.13th Edition. Physiology of Pregnancy (Chapter 60, Page 998) • Textbook of Medical Physiology by Guyton & Hall.14th Edition. Fetal and Neonatal Physiology. Section 14. (Chapter 84, Page 1066-1070) ○ https://teachmephysiology.com/reproductive- system/ ○ https://patient.info/pregnancy/premature-babies

Biochemistry Self Directed Learning (SDL)

Topics Of SDL	Learning Objectives	Learning resources
Male gonadal hormones	• Synthesis mechanism of action and functions of male gonadal hormones	• Mushtaq volume II, 7th edition (chapter 11 page – 333-338) • https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/gonad-function • https://www.youtube.com/watch?v=A5u_TY1A0t8 • Use digital library • https://www.ncbi.nlm.nih.gov/books/NBK29/
Female gonadal hormones	• Synthesis mechanism of action and functions of female gonadal hormones	• Mushtaq volume II, 7th edition (chapter 11 page – 357-366) • https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/gonad-functionn • https://www.youtube.com/watch?v=A5u_TY1A0t8 • Use digital library • https://www.ncbi.nlm.nih.gov/books/NBK29/
Introduction to nucleic acid and purine synthesis	• Digestion of nucleoprotein • Understand whole purine synthesis (Denovo and salvage pathway)	• Lippincott Illustrated reviews of biochemistry 8th edition (Chapter 22, page 292-295) • https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/purine-synthesis • https://www.youtube.com/watch?v=VXWyWzbigrg • Use digital library • https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3243375/
Purine catabolism	• Explain purine catabolism • Discuss related disorder	• Lippincott Illustrated reviews of biochemistry 8th edition (Chapter 22, page 298-301) • https://www.sciencedirect.com/topics/medicine-and-dentistry/purine-metabolism-disorder • https://www.youtube.com/watch?v=e2KFVvI8Akk • Use digital library • https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4215161/

Pyrimidine metabolism	• Explain Pyrimidine catabolism and related disorders	• Lippincott Illustrated reviews of biochemistry 8th edition (Chapter 22, page 302-304) • https://www.cliffsnotes.com/study-guides/biology/biochemistry-ii/purines-and-pyrimidines/pyrimidine-metabolism • https://www.youtube.com/watch?v=n7Uec8Jtr4E • Use digital library • https://www.ncbi.nlm.nih.gov/pmc/articles/PMC378357/
Regulation of gene expression	• Explain the regulation of gene expression	• Lippincott Illustrated reviews of biochemistry 8th edition (Chapter 22, page 465-477) • https://www.healio.com/hematology-oncology/learn-genomics/genomics-primer/regulation-of-gene-expression-in-eukaryotes • https://www.youtube.com/watch?v=J9jhg90A7Lw • Use digital library • https://www.nature.com/scitable/topicpage/regulation-of-transcription-and-gene-expression-in-1086/

Histology Practicals Skill Laboratory (SKL)

Topics	At The End Of Demonstration Student Should Be Able To	Learning Domains	Teaching Strategy	Assessment Tools
Testis, epididymis, ductus deferens	• Identify the histological slide of testis, ductus deferens and epididymis • Illustrate the microscopic picture of testis, ductus deferens and epididymis • Enlist two points of identification of each • Read a relevant research article • Use digital library	P C2 C1 C3 C3	Skill Lab	OSPE
Seminal vesicles, prostate	• Identify the histological slide of seminal vesicles and prostate • Illustrate the microscopic picture of seminal vesicles and prostate • Enlist two points of identification of each • Read a relevant research article • Use digital library	P C2 C1 C3 C3	Skill Lab	OSPE
Ovary	• Identify the histological slide of ovary • Illustrate the microscopic picture of ovary • Enlist two points of identification • Read a relevant research article • Use digital library	P C2 C1 C3 C3	Skill Lab	OSPE
Uterus, uterine tubes	• Identify the histological slide of Uterus and uterine tubes • Illustrate the microscopic picture of Uterus and uterine tubes • Enlist two points of identification of each • Read a relevant research article • Use digital library	P C2 C1 C3 C3	Skill Lab	OSPE

Physiology Practicals Skill Laboratory (SKL)

Practicals	At The End Of This Skill Lab, Student Should Be Able To Illustrate:	Learning Domains	Teaching Strategy	Assessment Tools
Specific gravity of urine	• Apparatus identification • Principle • Procedure • Precautions • Use of urinometer • Recall normal values of specific gravity	p C1 P C1 C1 C1	Skill lab	OSPE
Pregnancy Test	• Apparatus identification • Principle • Procedure • Precautions • Recall types of pregnancy test	P C1 P C1 C1	Skill lab	OSPE
Revision of Reflexes	• Types of reflexes • Principles • Procedure to check reflexes • Evaluation • Clinical correlation of reflexes	C1 C1 P C3 C3	Skill lab	OSPE

Biochemistry Practicals Skill Laboratory (SKL)

Topics	At the End Of Practical Students Should Be Able To	Learning Domain	Teaching Strategy	Assessment Tool
Estimation of uric acid	Perform estimation of uric acid by spectrophometer	P	Skill Lab	OSPE
Estimation of Cholestrol	Estimation of cholesterol by spectrophometer	P	Skill Lab	OSPE
Milk analysis	Protein, carbohydrates, lipid detection	P	Skill Lab	OSPE

SECTION - III

Basic and Clinical Sciences (Vertical Integration)

Content

- **CBLs**
- **Vertical Integration LGIS**
- **Longitudinal Themes**
    - **Biomedical Ethics & Professionalism**
    - **Family Medicine**
    - **Artificial Intelligence (Innovation)**
    - **Integrated Undergraduate Research Curriculum (IUGRC)**

Case Based Learning Objectives (CBL)

Subjects	Topics	At the end of the session the student should be able to	Learning Domains
Anatomy	• Prostatic Hyperplasia	Apply basic knowledge of subject to study clinical case.	C3
	• Ovarian Cyst	Apply basic knowledge of subject to study clinical case.	C3
Physiology	• Infertility	Apply basic knowledge of subject to study clinical case.	C3
	• Menorrhagia	Apply basic knowledge of subject to study clinical case.	C3
	• Contraception	Apply basic knowledge of subject to study clinical case.	C3
Biochemistry	• Gout	Apply basic knowledge of subject to study clinical case.	C3

Vertical Integration LGIS

Pathology

Topics	At the end of lecture students of should be able to:	Learning Domains	Teaching Strategy	Assessment Tools
Sexually transmitted diseases	• Enumerate the STDs • Describe the pathogenesis of syphilis and gonorrhea	C1 C2	LGIS	MCQ's
BPH/Prostatitis	• Define benign prostatic hyperplasia • Briefly discuss the morphological features of BPH & prostatitis	C1 C2	LGIS	MCQ's
Polycystic ovaries	• Define the polycystic ovaries Describe the pathophysiology of polycystic ovaries	C1 C2	LGIS	MCQ's

Community Medicine

Topics	At the end of lecture students of should be able to:	Learning Domains	Teaching Strategy	Assessment Tools
Sexually Transmitted Diseases				
Definition	• Define STD and its various factors	C1	LGIS	MCQ,
Problem statement	• Discuss the problem statement of STD worldwide.	C2		
Types of STDs	• Enumerate different types of STDs	C1		
Host factors related to STDs	• Discuss all host factors responsible for STDs	C2		
Demographic factors	• Discuss in detail role of demographic factors in STD spread.	C2		
Social factors role	• Role of social factors in STDs	C2		
Intervention strategies.	• Role of intervene on strategies and planning in control of STDs	C2		
AIDS	• Discuss In detail the definition of AIDS	C2	LGIS	MCQ
Problem statement of AIDS and HIV	• Discuss in detail the problem statement of HIV n AIDs. • Its impact on underdeveloped eloped world. • understanding the gravity of the situation.	C2		
Risk factors	• Discuss the key risk factors in HIV responsible.	C2		
Agent and other biological determinants	• Explain agent details • Describe the effect of agent stability and its biological determinants	C2		
Host, reservoir of infection and transmission details	• Detailed discussion on the host factors, reservoir of infection and transmission factors responsible.	C2		
Symtomology, treatment and prevention of AIDs and HIV	• Discuss in detail the symptomology, treatment and prevention of AIDS and HIV .	C2		

Family Medicine

Topic	At The End Of Lecture, Students Should Be Able To:	Learning Domain	Teaching Strategy	Assessment Tools
AIDS	• Discuss pathophysiology, signs and symptoms of patients with HIV • Discuss the diagnostic criteria • Discuss the complications • Discuss the management of disease and its complications.	C1 C2 C2 C2	LGIS	MCQs

Surgery

Topics	At The End Of Lecture, Students Should Be Able To:	Learning Domains	Teaching Strategy	Assessment Tools
Male hypogonadism	• Discuss pathophysiology, signs and symptoms of male hypogonadism • Describe altered hormonal levels in male hypogonadism • Outline treatment plan for breast tumors	C2 C2 C1	LGIS	MCQ
Undescended Testes	• Define UDT • Define Retractile Testes • Define Ectopic Testes • Causes of UDT/Ectopic Testes • Differentiate between UDT and Retractile Testes • Management plan	C1 C1 C1 C2 C2 C2	LGIS	MCQ
Acute Scrotum	• Enumerate the causes of acute scrotum • Describe Torsion, orchitis, epididymorchitisetc • Differentiate between Torsion and Epididymorchitis • Describe the approach towards diagnosis of acute scrotum	C1 C2 C2 C2	LGIS	MCQ

Obstetrics & Gynaecology

Topics	At the end of lecture students should be able to:	Learning Domains	Teaching Strategy	Assessment Tool
Menstrual irregularity due to anovulation	• Understand ovarian and endometrial changes during normal menstrual cycle • Describe the process of ovulation under the effect of LH • Describe causes of anovulation • Describe effects of anovulation • Enumerate the tests for confirmation of ovulation	C2 C2 C2 C2 C1	LGIS	MCQs

Biomedical Ethics and Professionalism

Topics	At the end of session students should be able to:	Learning Domains	Teaching Strategy	Assessment Tools
Ethical dilemmas in healthcare practice involving breach in principle of autonomy	• Analyze ethical dilemmas in healthcare practice involving breach in principle of autonomy. • Explain what procedures adopted to maintain patient autonomy. • Identify situations in which doctor may have to take decisions in the best interest of the patients	C3 C2 C1	Short video demonstration on violation of Ethical principle of autonomy from suit CBEC Video resources	• Assignment based assessment involving real life case scenarios under aggregate Marks. (Internal Assessment) • Assignment to be uploaded on LMS
Ethical dilemmas in healthcare practice involving breach in principle of beneficence and non-maleficence	• Analyze ethical dilemmas in healthcare practice involving breach in principle of beneficence and non-maleficence. • Explain what procedures adopted to maintain the principle of beneficence and non-maleficence in challenging situations. • Identify situations in which a doctor may have to take decisions in the best interests of the patient considering the principle of beneficence and non-maleficence	C3 C2 C1	Short video demonstration on violation of Ethical principle of beneficence and non-maleficence from suit CBEC Video resources Students deliberations and reflections Reflective writing	• Assignment based assessment involving real life case scenarios under aggregate Marks (Internal Assessment) • Assignment to be uploaded on LMS

Ethical dilemmas practice involving breach in principle of justice	• Analyze ethical dilemmas in healthcare practice involving breach in principle of justice. • Explain what procedures adopted to maintain the principle of justice in challenging situations. • Identify situations in which a doctor may have to take decisions in the best interests of the patient considering the principle of justice	C3 C2 C1	Short video demonstration on violation of Ethical principle of beneficence and non-maleficence from suit CBEC Video resources Students deliberations and reflections Reflective writing	• Assignment based assessment involving real life case scenarios under aggregate Marks (Internal Assessment) • Assignment to be uploaded on LMS

Integrated Undergraduate Research Curriculum (IUGRC)

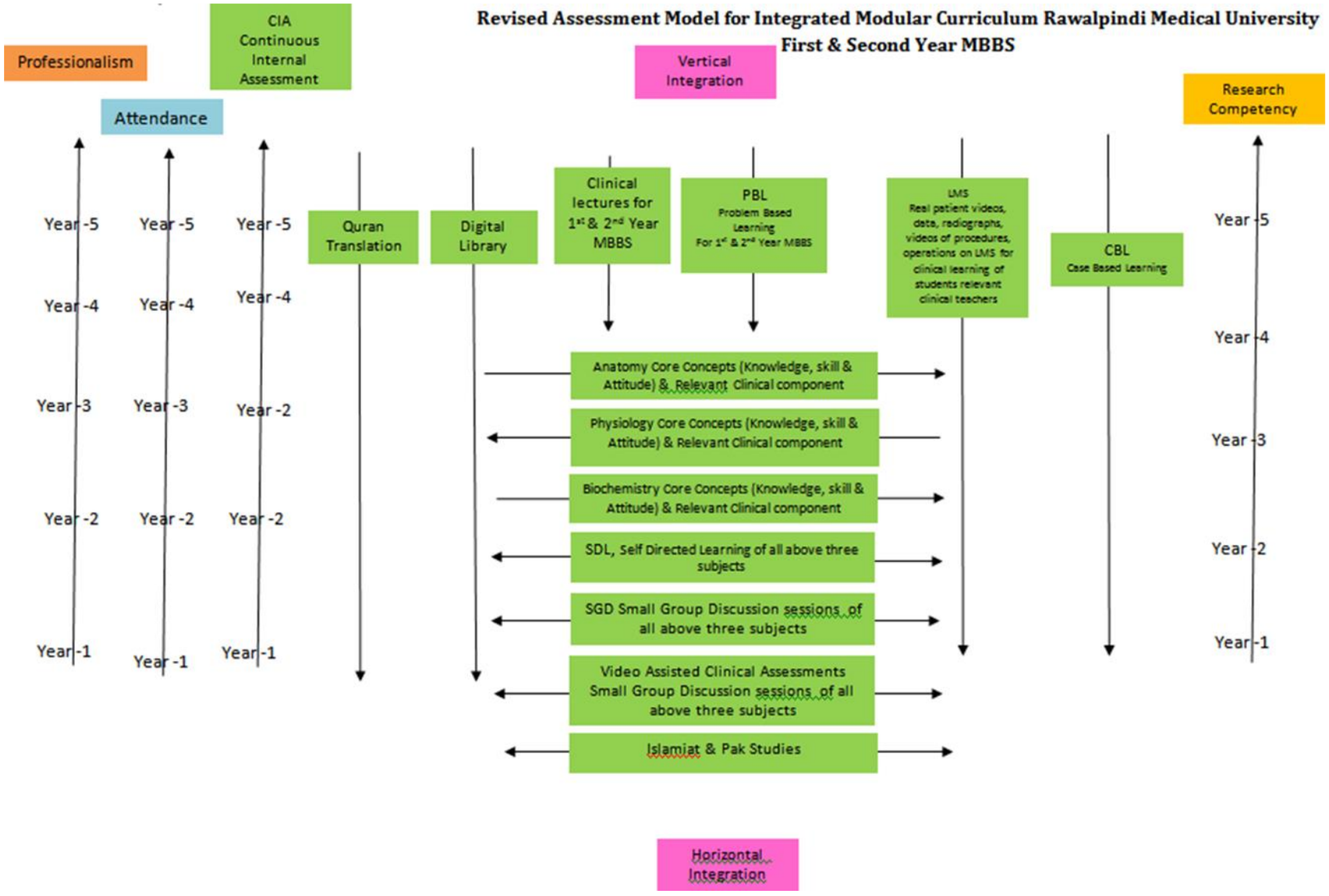
Topics	At the end of the session the student should be able to:	Learning Domains	Teaching Strategy	Assessment Tool
Orientation session on SPSS software	• Orientation to SPSS software • How to make variables	C3 C3	Activity	MCQs

SECTION - IV

Assessment Policies

Contents

- **Assessment plan**
- **Types of Assessment:**
- **Modular Examinations**
- **Block Examination**
- **Table 4: Assessment Frequency & Time in Reproduction Module**



Gauge for Continuous Internal Assessment (CIA)

Red Zone	High Alert	Yellow Zone	Green Zone	Excellent	Extra Ordinary
0 - 25%	26 - *50%	51 - 60%	61 – 70%	71 – 80%	81 - 100%

*50% and above is Passing Marks.

Gauge for attendance percentage

Red Zone	High Alert	Yellow Zone-1	Yellow Zone-2	Green Zone	Excellent
0 - 25%	26 - 50%	51 - 60%	61 – 74%	*75 – 80%	81 - 100%

90% is eligibility criteria for appearing in professional examination.

Assessment plan

University has followed the guidelines of Pakistan Medical and Dental Council for assessment. Assessment is conducted at the mid modular,modular and block levels.

Types of Assessment:

The assessment is formative and summative.

Formative Assessment	Summative Assessment
Formative assessment is taken at modular (2/3rd of the module is complete) level through MS Teams. Tool for this assessment is best choice questions and all subjects are given theshare according to their hour percentage.	Summative assessment is taken at the mid modular (LMS Based),modular and block levels.

Modular Assessment

Theory Paper	Viva Voce
There is a module examination at the end of first module of each block. The content of the whole teaching of the module are tested in this examination. It consists of paper with objective type questions and structured essay questions. The distribution of the questions is based on the Table of Specifications of the module. (Annexure I attached)	Structured table viva voce is conducted including the practical content of the module.

Block Assessment

On completion of a block which consists of two modules, there is a block examination which consists of one theory paper and a structured viva with OSPE.

Theory Paper	Block OSPE
There is one written paper for each subject. The paper consists of objective type questions and structured essay questions. The distribution of the questions is based on the Table of Specifications of the module.	This covers the practical content of the whole block.

Table 4-Assessment Frequency & Time in Reproduction Module

Block	Sr #	Module Reproduction Module Components	Type of Assessments	Total Assessments Time			No. of Assessments	
				Assessment Time	Summative Assessment Time	Formative Assessment Time		
Block-I	1	Mid Module Examinations LMS based (Anatomy, Physiology & Biochemistry)	Summative	30 Minutes	3 Hour 15 Minutes	45 Minutes	2 Formative	6 Summative
	2	Topics of SDL Examination on MS Team	Formative	30 Minutes				
	3	End Module Examinations (SEQ & MCQs Based)	Summative	2 Hours				
	4	Anatomy Structured and Clinically Oriented Viva	Summative	10 Minutes				
	5	Physiology Structured & Clinically oriented Viva voce	Summative	10 Minutes				
	6	Assessment of Clinical Lectures	Formative	15 Minutes				
	7	Assessment of Bioethics Lectures	Summative	2 Minutes				
	8	Assessment of IUGRC Lectures	Summative	10 Minutes				

Learning Resources

Subject	Resources
Anatomy	**A. Gross Anatomy** 1. Gray's Anatomy by Prof. Susan Standring 42th edition, Elsevier. 2. Clinical Anatomy for Medical Students by Richard S. Snell 10th edition. 3. Clinically Oriented Anatomy by Keith Moore 9th edition. 4. Cunningham's Manual of Practical Anatomy by G.J. Romanes, 16th edition, Vol-I, II and III **B. Histology** 1. B. Young J. W. Health Wheather's Functional Histology 6th edition. 2. Medical Histology by Prof. Laiq Hussain 7th edition. **C. Embryology** 1. Keith L. Moore. The Developing Human 11th edition. 2. Langman's Medical Embryology 14th edition. **D. Website** 1. https://my.clevelandclinic.org/health/articles/9117-male-reproductive-system 2. https://teachmeanatomy.info/pelvis/female-reproductive-tract/ 3. https://www.kenhub.com/en/start/pelvis-and-perineum **E. Youtube** 1. https://www.youtube.com/watch?v=G0ZuCilCu3E 2. https://www.youtube.com/watch?v=50iuBgTQCrQ **F. HEC Digital Library** 1. https://www.sciencedirect.com/science/article/pii/S0015028220304350 2. https://link.springer.com/article/10.1007/s11356-021-16581-9 3. https://link.springer.com/chapter/10.1007/978-3-030-30766-0_25 4. https://onlinelibrary.wiley.com/doi/abs/10.1111/and.13712
Physiology	**A. Textbooks** 1. Textbook of Medical Physiology by Guyton and Hall 14th edition. 2. Ganong 'S Review of Medical Physiology 26th edition. **B. Reference Books** 1. Human Physiology by Lauralee Sherwood 10th edition. 2. Berne & Levy Physiology 7th edition. 3. Best & Taylor Physiological Basis of Medical Practice 13th edition. 4. Guyton & Hall Physiological Review 3rd edition. **C. Website** **1.** https://teachmephysiology.com/reproductive-system/ (Reproductive physiology)

	2. https://courses.lumenlearning.com/wm-biology2/chapter/the-ovarian-cycle-the-menstrual-cycle-and-menopause/ 3. https://zerotofinals.com/obgyn/reproductivesystem/physiologyinpregnancy/ https://www.ibbiotech.com/en/info/sperm-capacitation/ **D. Youtube** 1. https://youtu.be/2_owp8kNMus (Female Reproductive system) 2. https://youtu.be/V9a2AQSJIMc (Dr Najeeb Lectures) https://youtu.be/rYVGjbzmAtg (Dr Najeeb lectures) **E. HEC Digital Library** 1. https://www.sciencedirect.com/science/article/abs/pii/S1532045621000296 2. https://www.sciencedirect.com/science/article/abs/pii/S001502822200485X **F. Physiology Journals** 1. https://rupress.org/jgp/article/5/4/441/30794/THE-RATE-OF-DECLINE-OF-MILK-SECRETION-WITH-THE 2. https://www.annualreviews.org/doi/abs/10.1146/annurev.ph.36.030174.001515?journalCode=physiol 3. https://zerotofinals.com/obgyn/reproductivesystem/physiologyinpregnancy/ https://www.msdmanuals.com/home/women-s-health-issues/normal-pregnancy/stages-of-development-of-the-fetus
Biochemistry	**Textbooks** 1. Harper's Illustrated Biochemistry 32th edition. 2. Lipponcott biochemistry 8th edition **B. Reference Books** 1.Lehninger Principle of Biochemistry 8th edition. 2. Biochemistry by Devlin 7th edition. **C. Website** • https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/gonad-function • https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/gonad-functionn • https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/purine-synthesis • https://www.sciencedirect.com/topics/medicine-and-dentistry/purine-metabolism-disorder • https://www.cliffsnotes.com/study-guides/biology/biochemistry-ii/purines-and- • https://www.healio.com/hematology-oncology/learn-genomics/genomics-primer/regulation-of-gene-expression-in-eukaryote **D. Youtube**

	• https://www.youtube.com/watch?v=A5u_TY1A0t8 • https://www.youtube.com/watch?v=A5u_TY1A0t8 • https://www.youtube.com/watch?v=VXWyWzbigrg • https://www.youtube.com/watch?v=e2KFVvI8Akk • https://www.youtube.com/watch?v=n7Uec8Jtr4E • https://www.youtube.com/watch?v=J9jhg90A7Lw **E. HEC Digital Library** • https://www.ncbi.nlm.nih.gov/books/NBK29/ • https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3243375/ • https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4215161/ • https://www.ncbi.nlm.nih.gov/pmc/articles/PMC378357/ • https://www.nature.com/scitable/topicpage/regulation-of-transcription-and-gene-expression-in-1086/ **F. Biochemistry Journals** • https://academic.oup.com/bmb/article/11/2/126/256755 • https://www.sciencedirect.com/topics/medicine-and-dentistry/gonadal-hormone

SECTION - V

Time Table

Integrated Clinically Oriented Modular Curriculum for Second Year MBBS

Reproduction Module Time Table

Second Year MBBS

Session 2021-2022

Batch- 49

Reproduction Module Team

Module Name	:	Reproduction Module
Duration of module	:	04 Weeks
Coordinator	:	Dr. Isma Riaz
Co-coordinator	:	Dr. Nayab Ramzan
Reviewed by	:	Module Committee

Module Committee		
1.	Vice Chancellor RMU	Prof. Dr. Muhammad Umar
2.	Director DME	Prof. Dr. Rai Muhammad Asghar
3.	Convener Curriculum	Prof. Dr. Naeem Akhter
4.	Chairperson Anatomy & Dean Basic Sciences	Prof. Dr. Ayesha Yousaf
5.	Additional Director DME	Prof. Dr. Ifra Saeed
6.	Chairperson Physiology	Prof. Dr. Samia Sarwar
7.	Chairperson Biochemistry	Dr. Aneela Jamil
8.	Focal Person Anatomy Second Year MBBS	Prof. Dr. Ifra Saeed
9.	Focal Person Physiology	Dr. Sidra Hamid
10.	Focal Person Biochemistry	Dr. Aneela Jamil
11.	Focal Person Pharmacology	Dr. Zunera Hakim
12.	Focal Person Pathology	Dr. Asiya Niazi
13.	Focal Person Behavioral Sciences	Dr. Saadia Yasir
14.	Focal Person Community Medicine	Dr. Afifa Kulsoom
15.	Focal Person Quran Translation Lectures	Dr. Fahad Anwar

Module Task Force Team		
1.	Coordinator	Dr. Isma Riaz (Senior Demonstrator of Biochemistry)
2.	DME Focal Person	Dr. Sidra Hamid (Assistant Professor of Physiology)
3.	Co-coordinator	Dr. Gaiti Ara (APWMO)
4.	Co-Coordinator	Dr. Nayab Ramzan (Senior Demonstrator of Biochemistry)
5.	Co-coordinator	Dr. Kamil Tahir (Senior Demonstrator of Physiology)

DME Implementation Team		
1.	Director DME	Prof. Dr. Rai Muhammad Asghar
2.	Implementation Incharge 1st & 2nd Year MBBS & Add. Director DME	Prof. Dr. Ifra Saeed
3.	Deputy Director DME	Dr Shazia Zaib
4.	Module planner & Implementation coordinator	Dr. Sidra Hamid
5.	Editor	Muhammad Arslan Aslam

Discipline wise Details of Modular Contents

<table>
<tr><th>Block</th><th>Subjects</th><th>Embryology</th><th>Histology</th><th>Gross Anatomy</th></tr>
<tr><td rowspan="3">1</td><td>• Anatomy</td><td>Embryology/Development
• Testis
• Genital Ducts
• Prostate & Accessory Glands
• Uterus & Uterine tubes
• Ovary & Vagina</td><td>Histology
• Testis
• Genital Ducts
• Prostate & Accessory Glands
• Uterus & Uterine Tubes
• Ovary & Vagina</td><td>• Sacrum
• Bony Pelvis & Joints of Pelvis
• Pelvic Fascia, Pelvic Diaphragm, & Pelvic Peritoneum
• Male External Genitalia, Scrotum, & Testis
• Prostate Vas Deferens, Seminal Vesicles & Ejaculatory Ducts
• Female External Genitalia, Ovaries, Fallopian Tubes
• Uterus, Cervix & Vagina
• Ischioanal Fossa
• Urogenital Diaphragm
• Perineum, Superficial Perineal Pouch and its contents
• Deep Perineal Pouch and its contents
• Blood Supply & Lymphatic Drainage of Pelvis & Perineum
• Sacral and Coccygeal Plexus
• Radiology, Surface Marking</td></tr>
<tr><td>• Biochemistry</td><td colspan="3">• Digestion of nucleic acid & biosynthesis of purines
• Purine catabolism and related disorders
• Pyrimidine metabolism
• Regulation of gene expression
• Male Gonadal Hormones
• Female Gonadal Hormones</td></tr>
<tr><td>• Physiology</td><td colspan="3">• Physiological anatomy of male reproductive
• system & spermatogenesis
• Physiological anatomy female reproductive system
• Semen, capacitation & acrosome reaction
• Monthly Ovarian Cycle, ovulation
• Male sex hormones, Abnormalities of male sexual
• function and spermatogenesis
• Monthly Endometrial Cycle and Menstruation
• Response of mother’s body to pregnancy and parturition
• Female sex hormones (oestrogen and progesterone)
• Lactation, Milk composition, breast feeding</td></tr>
</table>

		• Puberty, menarche, menopause, postmenopausal symptoms & anovulatory cycles, Abnormalities of • secretion by ovaries • Growth &functional development of fetus, Adjustments of infant to extrauterine life, Growth • & development in child • Fertilization of ovum, transport, implantation, Functions of placenta • Hormonal factors in pregnancy, Special functional • problems in neonate. Prematurity and its problems
	• Bioethics & Professionalism	• Ethical dilemmas Involving breech in Autonomy • Ethical dilemmas in healthcare practice involving breach in principle of beneficence and non-maleficence • Ethical dilemmas practice involving breach in principle of justice
	• Research Club Activity	• Orientation to SPSS software • How to make variables
	• Vertical components	• The Holy Quran Translation Component
	• Vertical Integration	Clinically Content Relevant To Reproduction Module • Male Hypogonadism Acute Scrotum (Surgery) • Undescended Testes (Surgery) • Sexually Transmitted Diseases/ BPH/Prostatitis (Pathology) • BPH/Prostatitis / Sexually Transmitted Diseases (Pathology) • Polycystic Ovaries (Pathology) • Menstrual Irregularities (Gynae & Obs) • Acquired Immunodeficiency Syndromes/ Sexually Transmitted Diseases (Community Medicine)

Categorization of Modular Contents

Anatomy

Category A*	Category B**	Category C***			
Special Embryology	**Special Histology**	**Demonstrations / SGD**	**CBL**	**Practical's**	**Self-Directed Learning (SDL)**
• Testis • Genital Ducts • Prostate & Accessory Glands • Uterus & Uterine Tubes • Ovary & Vagina	• Testis • Genital Ducts • Prostate & Accessory Glands • Uterus & Uterine Tubes • Ovary & Vagina	• Sacrum • Bony Pelvis & Joints of Pelvis • Pelvic Fascia, Pelvic Diaphragm, & Pelvic Peritoneum • Male External Genitalia, Scrotum, & Testis • Female External Genitalia, Ovaries, Fallopian Tubes • Uterus, Cervix & Vagina • Prostate Vas Deferens, Seminal Vesicles & Ejaculatory Ducts • Ischioanal Fossa • Urogenital Diaphragm • Perineum, superficial Perineal Pouch and its contents • Deep Perineal Pouch and its contents • Blood Supply & Lymphatic Drainage of Pelvis & Perineum • Sacral and Coccygeal Plexus • Radiology, Surface Marking	• Prostate (Benign prostate hyperplasia) • Ovary (ovarian cyst)	• Testis, Epididymis, Ductus Deferens • Seminal Vesicles, Prostate • Ovary, Uterus, Uterine Tubes	• Sacrum • Bony Pelvis & Joints of Pelvis • Pelvic Fascia, Pelvic Diaphragm, & Pelvic Peritoneum • Male External Genitalia, Scrotum, & Testis • Prostate Vas Deferens, Seminal Vesicles & Ejaculatory Ducts • Female External Genitalia, Ovaries, Fallopian Tubes • Uterus, Cervix & Vagina • Ischioanal Fossa • Urogenital Diaphragm • Perineum, superficial Perineal Pouch and its contents • Deep Perineal Pouch and its contents • Blood Supply & Lymphatic Drainage of Pelvis & Perineum • Sacral and Coccygeal Plexus

Category A*: By Professors

Category B:** By Associate & Assistant Professors

Category C*:** By Senior Demonstrators & Demonstrators

Teaching Staff / Human Resource of Department of Anatomy

Sr. #	Designation Of Teaching Staff / Human Resource	Total number of teaching staff
1.	Professor of Anatomy department	01
2.	Assistant professor of Anatomy department (AP)	01
3.	Demonstrators of Anatomy department	03

Contact Hours (Faculty)

Sr. #	Hours Calculation for Various Type of Teaching Strategies	Total Hours
1.	Large Group Interactive Session (LGIS)	2 * 05 = 10 hours
2.	Small Group Discussions (SGD)	2*12 + 1*2=26 hours
3.	Practical / Skill Lab	1.5 * 15 = 22.5 hours

Contact Hours (Students)

Sr. #	Hours Calculation for Various Type of Teaching Strategies	Total Hours
1.	Large Group Interactive Session (LGIS)	1 * 5 = 05 hours
2.	Small Group Discussions (SGD)	2*12+ 1*2=26 hours
3.	Practical / Skill Lab	1.5 * 3 = 4.5 hours
4.	Self-Directed Learning (SDL)	1 * 5 = 10 hours

Physiology

Category A*	Category B**	Category C***				
LGIS	**LGIS**	**PBL**	**CBL**	**Practical's**	**SGD**	**SDL**
• Monthly Ovarian Cycle, ovulation • (Monthly Endometrial Cycle and Menstruation	• Physiological anatomy of male reproductive system & spermatogenesis • Physiological anatomy female reproductive system • Semen, capacitation & acrosome reaction • Male sex hormones, abnormalities of male sexual function and spermatogenesis • Response of mother's body to pregnancy, Parturition • Female sex hormones (oestrogen and progesterone) • Lactation, milk composition, breast feeding • Puberty, menarche, menopause, postmenopausal symptoms & anovulatory cycles, abnormalities of secretion by ovaries • Fertilization of ovum, transport, implantation, functions of placenta • Hormonal factors in pregnancy, special functional problems in neonate. Prematurity and its problems.		1. Menorrhagia 2. Infertility 3. Contraception	1. Pregnancy test 2. Opthalmoscopy 3. Revision of Reflexes		1. Fertilization of ovum, transport, implantation, Functions of placenta 2. Growth &functional development of fetus, Adjustments of infant to extrauterine life, Growth & development in child 3. Special functional problems in neonate. Prematurity and its problems

Category A*: By Professors

Category B:** By Associate & Assistant Professors

Category C*:** By Senior Demonstrators & Demonstrators

Teaching Staff / Human Resource of Department of Physiology

Sr. #	Designation Of Teaching Staff / HumanResource	Total number ofteaching staff
1.	Professor of physiology department	01
2.	Associate professor of physiology department	01
3.	Assistant professor of physiology department (AP)	01
4.	Demonstrators of physiology department	07
5.	Residents of physiology department (PGTs)	08

Contact Hours (Faculty) & Contact Hours (Students)

Sr. #	Hours Calculation for Various Type of TeachingStrategies	Total Hours
1.	Large Group Interactive Session (LECTURES)	13 x 2= 26 x 1 hour = 26 hours
2.	Small Group Discussions (SGD)/CBL	15 x 1.5 hour = 22.5 hours
3.	Problem Based Learning (PBL)	---
4.	Practical / Skill Lab	15 x 1.5 hour = 22.5 hours
5.	Self-Directed Learning (SDL)	3 x 1 hour = 3 hours

Biochemistry

Category A*	Category B**	Category C***			
LGIS	**LGIS**	**PBL**	**CBL**	**Practical's**	**SGD**
• Regulation of gene expression	• Male gonadal hormones • Female gonadal hormones • Introduction to nucleic acid and purine synthesis • Purine catabolism and related disorders • Pyrimidine metabolism and related disorders		• Gout	• Estimation of Uric acid by spectrophometer • Estimation of cholesterol by spectrophometer • Analysis of Milk	• Purine synthesis and describe salvage pathway • Synthesis, mechanism of action and functions of male and female sex hormones

Category A*: By HOD and Assistant Professor

Category B:** By All (HOD, Assistant Professors, Senior Demonstrators)

Category C*:** (By All Demonstrators)

Teaching Staff / Human Resource of Department of Biochemistry

Sr. #	Designation Of Teaching Staff / Human Resource	Total number of teaching staff
1	Assistant professor of biochemistry department (AP)	02
2	Demonstrators of biochemistry department	08

Contact Hours (Faculty) & Contact Hours (Students)

Sr. #	Hours Calculation for Various Type of Teaching Strategies	Total Hours (Faculty)	Total Hours (student)
1.	Large Group Interactive Session (LECTURES)	2 * 6 = 12 hours	06
2.	Small Group Discussions (SGD)	1.5 * 3 = 4.5 hours	4.5
3.	Problem Based Learning (PBL)	Zero	zero
4.	Practical / Skill Lab	1.5 * 3= 4.5 hours	4.5
5.	Self-Directed Learning (SDL)	----------	05

Reproduction Module (First Week)
(25-04-2023 To 29-04-2023)

Date/Day	8:00am-9:30am	9:30am – 10:20am		10:20am-11:10am		11:10am-12:00pm		12:00pm – 12:20pm	12:20pm – 2:00pm	Home Assignments (2HRS)
24-04-2023 MONDAY 25-04-2023 TUESDAY	**Eid Holidays**									
26-04-2023 WEDNESDAY	**Practical & SGD/CBL** Topics & venue mentioned at the end	**PHYSIOLOGY (LGIS)**		**ANATOMY (LGIS)**		**BIOCHEMISTRY (LGIS)**		**BREAK**	**SGD/DISSECTION**	SDL Biochemistry Gene Expression, Constituents of Purine synthesis and Salvage Pathway of Purine Metabolism
		Physiological anatomy of female reproductive system,	Physiological anatomy of male reproductive system & spermatogenesis,	Special Embryology Development of Testis	Special Histology Histology of Testis	Gene Expression	Nucleic Acid & purine synthesis	B R E A K	Sacrum, Bony Pelvis & Joints of Pelvis	
		ProfDr Samia Sarwar/ Dr Sheena (Even)	Dr Fareed (Odd)	Prof. Dr. Ifra (Even)	Assis. Prof. Dr. Maria (Odd)	Dr. Isma (Even)	Dr. Uzma (Odd)			
27-04-2023 THURSDAY	**Practical & SGD/CBL** Topics & venue mentioned at the end	**ANATOMY (LGIS)**		**PHYSIOLOGY (LGIS)**		**BIOCHEMISTRY (LGIS)**			**CBL/DISSECTION**	SDL Anatomy Sacrum, Bony Pelvis & Joints of Pelvis**,** Pelvic Fascia, Pelvic Peritoneum, Pelvic Diaphragm & Contents of Pelvic Cavity
		Special Histology Histology of Testis	Special Embryology Development of Testis	Physiological anatomy of male reproductive system & spermatogenesis,	Physiological anatomy of female reproductive system	Nucleic Acid & purine synthesis	Gene Expression		Pelvic Fascia, Pelvic Peritoneum, Pelvic Diaphragm Contents of Pelvic Cavity Dissection	
		Assis. Prof. Dr. Maria (Even)	Prof. Dr Ifra (Odd)	Dr Fareed (Even)	Prof. Dr Samia Sarwar/ Dr Sheena (Odd)	Dr. Uzma (Even)	Dr. Isma (Odd)			
28-04-2023 FRIDAY	**8:00 AM – 9:00 AM** **PRACTICAL & SGD/CBL**	**9:00 AM – 10:00AM** **ANATOMY (LGIS)**		**10:00AM – 11:00 AM** **QURAN TRANSLATION - I**		**11:00AM – 12:00PM** **PRACTICAL & SGD/CBL**				
	Practical & SGD/CBL Topics & venue mentioned at the end (Monday batches)	Special Histology Histology of Genital Ducts and Histology of Prostate & Seminal vesicles	Special Embryology Development of Genital Ducts and Development of Prostate & Accessory gland	Imaniat-5	Akhlaqiat-1	Practical & SGD/CBL Topics & venue mentioned at the end (Tuesday batches)				
		Assis. Prof. Dr. Maria (Even)	Prof. Dr Ifra (Odd)	Mufti Naeem (Even)	Dr. Fahd (Odd)					
29-05-2023 SATURDAY	**8:00 AM – 9:30 AM** **Practical & SGD/CBL** Topics & venue mentioned at the end	**9:30 AM – 10:20AM** **PHYSIOLOGY (LGIS)**		**10:20AM – 11:10 AM** **ANATOMY (LGIS)**		**11:10AM – 12:05PM** **PAK STUDIES/ISLAMIYAT**	**12:05PM – 01:00PM**	**01:00PM – 02:00PM** **SGD/DISSECTION**		2HRS SDL Anatomy External Male Genitalia, Testis & Scrotum
		Monthly Ovarian Cycle, ovulation Monthly Endometrial Cycle and Menstruation	Semen, Capacitation & acrosome reaction Male sex hormones, Abnormalities of male sexual function and spermatogenesis	Special Embryology Development of Genital Ducts and Development of Prostate & Accessory gland	Special Histology Histology of Genital Ducts and Histology of Prostate & Seminal vesicles	Kaamyab logu ki sifaat	Nehru report, Quaid e Azam k 14 nukaat	Nehru report, Quaid e Azam k 14 nukaat	Kaamyab logu ki sifaat	External Male Genitalia, Testis & Scrotum	SDL Physiology Physiological anatomy of female reproductive system, Monthly Ovarian Cycle
		Prof. Dr Samia Sarwar/ Dr Sheena (Even)	Dr. Fareed (Odd)	Prof. Dr Ifra (Even)	Assis. Prof. Dr. Maria (Odd)	Mufti Naem (Even)	Qari Aman Ullah (Odd	Qari Aman Ullah (Even)	Mufti Naem (Odd)		

Topics for Practical with Venue	Topics for Small Group Discussion & CBLs With Venue
• Histology of Testis, epididymis, ductus deferens (Anatomy Histology Practical) Venue- Histology laboratory • Estimation of serum Uric acid by Spectrophotometer (Biochemistry Practical) Venue- Biochemistry laboratory • Pregnancy test (Physiology Practical) Venue – Physiology Lecture Hall No 5	• Physiology CBL: Menorrhagia (Venue: Physiology Demo Room (Basement)) • Biochemistry tutorial: Deno synthesis of purine, describe salvage pathway (Venue: Lecture Hall No 2)

Schedule for Practical / Small Group Discussion

Days	Histology Practical	Biochemistry Practical	Physiology Practical	Physiology SGD	Biochemistry SGD
Wednesday	E	D	B	C	A
Thursday	B	A	D	E	C
Friday	D and C	C and B	A and E	B and A	E and D
Saturday	A	E	C	D	B

Venue for Second Year Batches for Anatomy Dissection / Small Group Discussion

Batches	Roll No	Anatomy Teacher	Venue
A	01-90	Dr. Sadia	Lecture Hall No. 04 Anatomy Lecture Hall
B	91-180	Dr. Gaiti	LTC- 1
C	181- 270	Dr. Mariyam	LTC-4
D	271 onwards	Dr. Sajjad	Lecture Hall No.03 Anatomy Lecture Hall

Venue for Second Year Batches for PBL & SGD Team-II

Batches	Roll No	Venue	
Batch-A1	(01-35)	New Lecture Hall complex no.01	Dr. Muhammad Usman
Batch-A2	(36-70)	New Lecture Hall complex no.04	Dr. Shazia Nosheen
Batch-B1	(71-105)	Demo Room (Basement)	Dr. Ali Zain
Batch-B2	(106-140)	Demo Room (Basement)	Dr. Kamil Tahir
Batch-C1	(141-175)	Demo Room (Basement)	Dr. Maryam Abbas (PGT Physiology)
Batch-C2	(176-210)	Demo Room (Basement)	Dr. Nayab (PGT Physiology)
Batch-D1	(210-245)	Lecture Hall no.03 (First Floor)	Dr. Iqra Ayub (PGT Physiology)
Batch-D2	(246-280)	Anatomy Museum (First Floor Anatomy)	Dr. Almas (PBL) Dr. Najam-us-Sehar (SGD)
Batch-E1	(281-315)	Lecture Hall no.04 (First Floor Anatomy)	Dr. Najam-us-Sehar (SGD) Dr. Sheena Tariq (PBL)
Batch-E2	(315 onwards)	Lecture Hall no.05 Physiology	Dr. Rahat (PBL) Dr. Fareed Ullah (SGD)

Sr. No	Batch	Roll no	Names of Teachers	
			Biochemistry	Physiology
1.	Batch – A	01-70	Dr. Faiza Zafar	Dr. Aneela / Dr. Najam-us-Sehar
2.	Batch –B	71-140	Dr. Uzma Zafar	Dr. Shazia Nosheen
3.	Batch – C	141-210	Dr. Romasa	Dr. Nayab / Dr. Usman
4.	Batch –D	211-280	Dr. Rahat Afzal	Dr. Izzah Raashid & Dr. Iqra Ayub
5.	Batch -E	281- onwards	Dr. Almas Ijaz	Dr. Kamil Tahir

Venues for Large Group Interactive Session (LGIS) and SDL	
Odd Roll Numbers	New Lecture Hall Complex Lecture Theater # 01
Even Roll Number	New Lecture Hall Complex Lecture Theater # 04

Topic Details of SDL Biochemistry
• Constituents of Purine & Pyrimidine Bases
• Salvage Pathway of Purine Metabolism
• Regulation of gene expression

(Reproduction Module Second Week)
(08-05-2023 To 13-05-2023)

Date/Day	8:00am-9:30am	9:30am – 10:20am		10:20am-11:10am		11:10am-12:00pm		12:00pm – 12:20pm	12:20pm – 2:00pm	Home Assignments(2HRS)
01-05-2023 MONDAY	**Labour day**									
02-05-2023 TUESDAY	**Practical & SGD/CBL** Topics & venue mentioned at the end	**PHYSIOLOGY (LGIS)**		**ANATOMY (LGIS)**		**SURGERY (LGIS)**		**B R E A K**	**SGD/DISSECTION**	SDL Biochemistry Mechanism of action of
		Monthly Ovarian Cycle, ovulation Monthly Endometrial Cycle and Menstruation	Semen, Capacitation & acrosome reaction Male sex hormones, Abnormalities of male sexual function and spermatogenesis	Special Histology	Special Embryology	Male hypogonadism Acute Scrotum			Male Internal Genital Organs (Prostate Vas deferens, seminal vesicles & ejaculatory ducts)	Steroid Hormones and Synthesis of Sex Hormones
				Histology of Uterus & Uterine Tubes	Development of Uterus & Uterine Tubes					
		Prof. Dr Samia Sarwar /Dr. Sheena (Odd)	Dr. Fareed (Even)	Assis. Prof. Dr. Maria (Even)	Prof. Dr. Ifra (Odd)	Dr. Mariyam (Even)	Dr. Faraz (Odd)			
03-05-2023 WEDNESDAY	**Practical & SGD/CBL** Topics & venue mentioned at the end	**PHYSIOLOGY (LGIS)**		**ANATOMY (LGIS)**		**PATHOLOGY (LGIS)**			**SGD/DISSECTION**	SDL Physiology Male Reproductive Physiology
		Response of mother's body to pregnancy, Parturition	Female sex hormones (oestrogen and progesterone)	Special Embryology	Special Histology	Sexually transmitted diseases	BPH/Prostatitis		Female Internal Genital Organs (Ovaries and Fallopian Tubes)	
				Development of Uterus & Uterine Tubes	Histology of Uterus & Uterine Tubes					
		Dr. Sheena (Even)	Dr. Shazia (Odd)	Prof. Dr. Ifra (Even)	Assis. Prof. Dr. Maria (Odd)	Dr Abid Hassan (Even)	Dr Rabbiya Khalid (Odd)			
04-05-2023 THURSDAY	**Practical & SGD/CBL** Topics & venue mentioned at the end	**ANATOMY (LGIS)**		**BIOCHEMISTRY (LGIS)**		**PATHOLOGY (LGIS)**			**CBL/DISSECTION**	SDL Biochemistry Purine Catabolism & Related Disorders
		Special Embryology	Special Histology	Purine catabolism	Male & Female Sex Hormones	BPH/ Prostatitis	Sexually transmitted diseases		Female Internal Genital Organs (Uterus & cervix)	
		Development of Ovary & Vagina	Histology of Ovary & Vagina							
		Prof. Dr. Ifra (Even)	Assis. Prof. Dr. Maria (Odd)	Dr. Uzma (Even)	Dr. Almas (Odd)	Dr Rabbiya Khalid (Even)	Dr Abid Hassan (Odd)			
05-05-2023 FRIDAY	**8:00 AM – 9:00 AM**	**9:00 AM – 10:00AM**		**10:00AM – 11:00 AM**		**11:00AM – 12:00PM**				
	Surgery (LGIS)	**ANATOMY (LGIS)**		**BIOCHEMISTRY (LGIS)**		QURAN TRANSLATION – II				
		Special Histology	Special Embryology	Male & Female Sex Hormones	Purine catabolism	Akhlaqiat-1	Imaniat-5			
	Undescended Testes	Histology of Ovary & Vagina	Development of Ovary & Vagina							
	Dr. Rameez (Even) Dr. Ameen (Odd)	Assis. Prof. Dr. Maria (Even)	Prof. Dr. Ifra (Odd)	Dr. Almas (Even)	Dr. Uzma (Odd)	Dr. Fahd Anwar (Even)	Mufti Naeem Sherazi (Odd)			
06-05-2023 SATURDAY	Practical & SGD/CBL Topics & venue mentioned at the end	**PHYSIOLOGY (LGIS)**		**BIOMEDICAL (CLUB ACTIVITY)**				**SGD/DISSECTION**		SDL Anatomy Male Internal Genital Organs (Prostate Vas deferens, seminal vesicles & ejaculatory ducts) Female Internal Genital Organs Uterus cervix, (Ovaries, Fallopian Tubes)
		Female sex hormones (oestrogen and progesterone)	Response of mother's body to pregnancy, Parturition	Ethical dilemmas Involving breech in Autonomy				Ischioanal Fossa		
		Dr. Shazia (Even)	Dr. Sheena (Odd)	Biomedical ethics PBL/ SGD team detail given on next page						

Topics for Practical with Venue	Topics for Small Group Discussion& CBLs With Venue
• Histology of Seminal Vesicles & Prostate (Anatomy Histology Practical) Venue-Histology Laboratory • Estimation of Cholestrol by Spectrophotometer (Biochemistry Practical) Venue- Biochemistry Laboratory • Examination of VII Cranial Nerves (Physiology Practical) Venue – Physiology Lab	• Physiology CBL: Infertility (Venue: Lecture Hall No 5) • Biochemistry CBL: Gout: (Lecture Hall No 2)

Schedule for Practical / Small Group Discussion

Day	Histology Practical	Biochemistry Practical	Physiology Practical	Physiology SGD	Biochemistry SGD
Tuesday	**D**	**C**	**A**	**B**	**E**
Wednesday	**E**	**D**	**B**	**C**	**A**
Thursday	**B**	**A**	**D**	**E**	**C**
Saturday	**A**	**E**	**C**	**D**	**B**

Venue for Second Year Batches for Anatomy Dissection / Small Group Discussion

Batches	Roll No	Anatomy Teacher	Venue
A	01-90	Dr. Sadia Baqir	Lecture Hall No. 04 Anatomy Lecture Hall
B	91-180	Dr. Gaiti Ara	LTC-1
C	181- 270	Dr. Mariyam	LTC-4
D	271 onwards	Dr. Sajjad	Lecture Hall No.03 Anatomy Lecture Hall

Venue for Second Year Batches For PBL, SGD & Biomedical (Club Activity) Team-II

Batches	Roll No	Venue	
Batch-A1	(01-35)	New Lecture Hall complex no.01	Dr. Muhammad Usman
Batch-A2	(36-70)	New Lecture Hall complex no.04	Dr. Shazia Nosheen
Batch-B1	(71-105)	Demo Room (Basement)	Dr. Ali Zain
Batch-B2	(106-140)	Demo Room (Basement)	Dr. Kamil Tahir
Batch-C1	(141-175)	Demo Room (Basement)	Dr. Maryam Abbas (PGT Physiology)
Batch-C2	(176-210)	Demo Room (Basement)	Dr. Nayab (PGT Physiology)
Batch-D1	(210-245)	Lecture Hall no.03 (First Floor)	Dr. Iqra Ayub (PGT Physiology)
Batch-D2	(246-280)	Anatomy Museum (First Floor Anatomy)	Dr. Almas (PBL) Dr. Najam-us-Sehar (SGD)
Batch-E1	(281-315)	Lecture Hall no.04 (First Floor Anatomy)	Dr. Najam-us-Sehar (SGD) Dr. Sheena Tariq (PBL)
Batch-E2	(315 onwards)	Lecture Hall no.05 Physiology	Dr. Rahat (PBL) Dr. Fareed Ullah (SGD)

Sr. No	Batch	Roll no	Names of Teachers	
			Biochemistry	Physiology
1.	Batch – A	01-70	Dr. Faiza Zafar	Dr. Aneela / Dr. Najam-us-Sehar
2.	Batch –B	71-140	Dr. Uzma Zafar	Dr. Shazia Nosheen
3.	Batch – C	141-210	Dr. Romasa	Dr. Nayab / Dr. Usman
4.	Batch –D	211-280	Dr. Rahat Afzal	Dr. Izzah Raashid & Dr. Iqra Ayub
5.	Batch -E	281-onwards	Dr. Almas Ijaz	Dr. Kamil Tahir

Venues for Large Group Interactive Session (LGIS) and SDL

Odd Roll Numbers	New Lecture Hall Complex Lecture Theater # 01
Even Roll Number	New Lecture Hall Complex Lecture Theater # 04

Reproduction Module (Third Week)
(15-05-2023 To 20-05-2023)

Date/Day	8:00am-9:30am	9:30am – 10:20am		10:20am-11:10am		11:10am-12:00pm		12:00pm – 12:20pm	12:20pm – 2:00pm	Home Assignments(2HRS)
08-05-2023 MONDAY	**Practical & SGD/CBL** Topics & venue mentioned at the end	**PHYSIOLOGY (LGIS)**		**PATHOLOGY (LGIS)**		**QURAN TRANSLATION - III**		**BREAK**	**SGD/DISSECTION**	SDL Anatomy Ischioanal Fossa Urogenital Diaphragm Online SDL & Clinical Evaluation
		Lactation, Milk composition, breast feeding	Puberty, menarche, menopause PMS & anovulatory cycles, Abnormalities of secretion by ovaries	Polycystic ovaries		Imaniat-6	Akhlaqiat-2	B R E A K	Urogenital Diaphragm	
		Dr. Sheena (Even)	Dr. Shazia (Odd)	Dr Tayaba Ali (Even)	Dr. Aasiya Niazi (Odd)	Mufti Naeem Sherazi (Even)	Dr. Fahd Anwar (Odd)			
09-05-2023 TUESDAY	**Practical & SGD/CBL** Topics & venue mentioned at the end	**PHYSIOLOGY (LGIS)**		**COMMUNITY MEDICINE (LGIS)**		**GYNAE AND OBS (LGIS)**			**SGD/DISSECTION**	SDL Biochemistry Pyrimidine Metabolism & Related Disorde
		Puberty, menarche, menopausePMS & anovulatorycycles,Abnormalities of secretion by ovaries	Lactation, Milk composition, breast feeding	Sexually Transmitted Diseases (STDs)	Acquired immunodeficiency syndromes (AIDs)	Menstrual irregularities			Perineum, Superficial Perineal Pouch & Contents	
		Dr. Shazia (Even)	Dr. Sheena (Odd)	Dr. Rizwan (Even)	Dr. Asif (Odd)	Dr Shama Bashir (Even)	Dr. Saira Ahmed (Odd)			
10-05-2023 WEDNESDAY	**Practical & SGD/CBL** Topics & venue mentioned at the end	**PHYSIOLOGY (LGIS)**		**Biomedical Ehtics (Club Activity)**		**COMMUNITY MEDICINE (LGIS)**			**SGD/DISSECTION**	SDL Physiology Neonatal physiology
		Fertilization of ovum, transport, implantation, Functions of placenta	Growth &functional development of fetus, Adjustments of infant to extrauterine life, Growth & development in child	Ethical dilemmas in healthcare practice involving breach in principle of beneficence and non-maleficence		Acquired immunodeficiency syndromes (AIDs)	Sexually Transmitted Diseases (STDs)		Deep Perineal Pouch & Contents	
		Dr. Shazia (Even)	Dr. Usman (odd)	Biomedical ethics PBL/ SGD team detail given on next page		Dr. Asif (Even)	Dr. Rizwan (Odd)			
11-05-2023 THURSDAY	**Practical & SGD/CBL** Topics & venue mentioned at the end	**PHYSIOLOGY (LGIS)**		**Biomedical Ehtics (Club Activity**		**BIOCHEMISTRY (LGIS)**			**SGD/DISSECTION**	SDL Biochemistry Pyrimidine Metabolism & Related Disorde
		Growth &functional development of fetus, Adjustments of infant to extrauterine life, Growth & development in child	Fertilization of ovum, transport, implantation, Functions of placenta	Ethical dilemmas practice involving breach in principle of justice		Pyrimidine Metabolism	Sex hormones		Blood Supply, Venous Drainage & Lymphatic Drainage of Pelvis & Perineum	
		Dr. Usman (Even)	Dr. Shazia (Odd)	Biomedical ethics PBL/ SGD team detail given on next page		Dr. Uzma (Even)	Dr. Almas (Odd)			
12-05-2023 FRIDAY	**8:00 AM – 9:00 AM**	**9:00 AM – 10:00AM**		**10:00AM – 11:00 AM**		**11:00AM – 12:00PM**				
	Practical & SGD/CBL	**SGD/DISSECTION**		**BIOCHEMISTRY (LGIS)**		**PHYSIOLOGY (LGIS)**				
	Practical & SGD/CBL Topics & venue mentioned at the end **(Monday BATCHS of last week)**	Sacral & Coccygeal Plexus		Sex hormones-II	Pyrimidine Metabolism	Special functional problems in neonate. Prematurity and its problems	Hormonal factors in pregnancy			
				Dr. Almas(Even)	Dr. Uzma (Odd)	Dr. Usman (Even)	Dr. Sheena (Odd)			
13-05-2023 SATURDAY	**8:00am-9:30am**	**9:30am – 10:20am**		**10:20am-11:10am**		**11:10am-12:00pm**		**12:00pm – 12:20pm**	**12:20pm – 2:00pm**	**Home Assignments(2HRS)**
	Practical & SGD/CBL Topics & venue mentioned at the end	**PHYSIOLOGY (LGIS)**		**IUGRC**		**MEDICINE (LGIS)**		B R E A K	**SGD/DISSECTION**	SDL Anatomy SDL AnatomyPerineum, Superficial Perineal Pouch & Contents Deep Perineal Pouch & Contents Blood Supply, Venous Drainage & Lymphatic Drainage of Pelvis & Perineum Sacral & Coccygeal Plexus
		Hormonal factors in pregnancy	Special functional problems in neonate.Prematurity and its problems	Orientation to SPSS software How to make variables		AIDS			Radiology & Surface Marking	
		Dr. Sheena (Even)	Dr. Usman (Odd)	Dr. Afifa	Dr. Abdul Qadoos / Dr. Khaula	Dr Shaheer (Even)	Dr Shabaz Ashraf (Odd)			

Topics for Practical with Venue	Topics for Small Group Discussion& CBLs With Venue
• Histology of uterus, uterine tube and ovary (Anatomy Histology Practical) Venue- Histology Laboratory • Milk Analysis (Biochemistry Practical) Venue- Biochemistry Laboratory • Examination of III, IV & VI Cranial Nerves (Physiology Practical) Venue – Physiology Lab	• Physiology SGD: Special Problems of Prematurity (In Neonate) (Venue: Lecture Hall No 5) • Biochemistry SGD: Synthesis mechanism of action and funtions of sex hormones: Lecture Hall No 2)

Schedule for Practical / Small Group Discussion

Day	Histology Practical	Biochemistry Practical	Physiology Practical	Physiology SGD	Biochemistry SGD
Monday	**C**	**B**	**E**	**A**	**D**
Tuesday	**D**	**C**	**A**	**B**	**E**
Wednesday	**E**	**D**	**B**	**C**	**A**
Thursday	**B**	**A**	**D**	**E**	**C**
Friday	**C**	**B**	**E**	**A**	**D**
Saturday	**A**	**E**	**C**	**D**	**B**

Venue for Second Year Batches for Anatomy Dissection / Small Group Discussion

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C	181-270	Dr. Mariyam	LTC-4
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Venue for Second Year Batches For PBL, SGD & Biomedical (Club Activity) Team-II

Batches	Roll No	Venue	
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4.	Batch –D	211-280	Dr. Rahat Afzal	Dr. Izzah Raashid & Dr. Iqra Ayub
5.	Batch -E	281-onwards	Dr. Almas Ijaz	Dr. Kamil Tahir

Venues for Large Group Interactive Session (LGIS) and SDL	
Odd Roll Numbers	New Lecture Hall Complex Lecture Theater # 01
Even Roll Number	New Lecture Hall Complex Lecture Theater # 04

Topic Details Of SDL Biochemistry

- Constituents of Purine & Pyrimidine Bases
- Salvage Pathway of Purine Metabolism
- Pyrimidine metabolism

Reproduction Module (Fourth Week)
(22-05-2023 To 27-05-2023)

Date/time	9:00am - 12:00pm	12:00-02:00pm
15-05-2023 MONDAY	Anatomy Theory Paper	
16-05-2023 TUESDAY	Physiology Theory Paper & Video Assisted Quiz	
17-05-2023 WEDNESDAY	Biochemistry Theory Paper & Allieds	
18-05-2023 THURSDAY	Anatomy /Physiology Viva Voce	
19-05-2023 FRIDAY	Anatomy /Physiology Viva Voce	
20-05-2023 SATURDAY	SDL For Upcoming Module	

*Note: Detailed notice regarding content, time and venue will be issued accordingly

Note: Timetable Subject to change according to the current circumstances.

SECTION-VI

Table of Specification (TOS) For Reproduction Module Examination

Sr. #	Discipline	No. of MCQs (%)	No. of MCQs according to cognitive domain			No. of SEQs (%)		No. of SEQs according to cognitive domain			Viva voce	Total Marks
						No. of items	Marks					
			C1	C2	C3			C1	C2	C3		
1.	Anatomy	20	10	5	5	4	20	1	1	2	60	100
2.	Physiology	30	18	9	3	4	20	1	1.5	1.5	25	75
3.	Biochemistry	8	4	3	1	1	5	-	1	-	-	13
4.	Bioethics Professionalism	5	-	3	2	-	-	-	-	-	-	5
5.	Research, Artificial Intelligence & Innovation	5	-	3	2	-	-	-	-	-	-	5
6.	Pathology	3	-	2	1	-	-	-	-	-	-	3
7.	Medicine	5	-	3	2	-	-	-	-	-	-	5
8.	Surgery	3	-	2	1	-	-	-	-	-	-	3
9.	Obs & Gynaecology	5	-	3	2	-	-	-	-	-	-	5
10.	Community Medicine	4	-	2	2	-	-	-	-	-	-	4
										Grand Total		218

Annexure I

(Sample MCQ & SEQ Papers)

RAWALPINDI MEDICAL UNIVERSITY, RWP
ANATOMY DEPARTMENT
2nd Year MBBS Module Exam (Reproduction)

1. A 30 year old male having mumps came to emergency with high grade fever with feeling of heaviness, pain and swelling of scrotum. What is the most likely diagnosis
    a. Orchitis
    b. Cryptorchidism
    c. Prostatitis
    d. Salpingitis
    e. Urethritis

2. A 70-year-old male presented to OPD with severe dull backache, loss of weight and severe fatigue. His Prostate Specific Antigen were raised. On Direct Rectal Examination a hard, immobile and irregular mass was confirmed anteriorly. Most likely diagnosis is
    a. BPH
    b. Sciatica
    c. PID
    d. Prostatic Cancer
    e. Prostatitis

3. A baby was brought to a GP Clinic with the opening of the urethra on the downward curve of penis. The baby has
    a. Epispadias
    b. Bladder exstrophy
    c. Omphalocele
    d. Rectocele
    e. Hypospadias

4. While crossing road an elder woman was run over by a speeding car. She was taken to the emergency department by the police where an X-ray examination of the pelvis revealed the disruption of the sacroiliac joint and fracture of the body of the pubis.
    Which viscera are the most vulnerable to injury during pelvic fracture?
    a. Urinary bladder and urethra.
    b. sigmoid colon.
    c. appendix
    d. cecum
    e. anal canal

5. A woman came to gynae OPD with pain lower abdomen and pelvis. Medical officer suspected rupture of ovarian cyst which was confirmed on Ultrasound of pelvis as there was a collection of fluid in the rectouterine pouch. Culdocentesis was decided via syringe, the needle would be introduced through:
    a. Anterior fornix of vagina .
    b. Posterior fornix of vagina .
    c. Anal canal
    d. Rectum
    e. Urethra.

RAWALPINDI MEDICAL UNIVERSITY
REPRODUCTION MODULE EXAM 2ND YEAR MBBS
ANATOMY SEQS

Note: Attempt all questions. All questions carry equal marks. Draw diagram where necessary

Q1 a. Draw and label microscopic structure of fallopian tubes. 03

b. Briefly describe blood testis barrier. 02

Q2. 30 years female presented in gynae OPD with complaint of repeated miscarriages. On ultrasonography she was diagnosed as a case of uterus didelphys (double uterus).

a. Give embryological basis of this condition. 02
b. Tabulate the adult derivatives and remnants of mesonephric and paramesonephric ducts in males and females. 03

RAWALPINDI MEDICAL UNIVERSITY

DEPARTMENT OF PHYSIOLOGY

REPRODUCTION MODULE FOR SECOND YEAR MBBS

1. Testosterone is secreted by:

   a. Anterior pituitary gland
   b. Posterior pituitary gland
   c. Leyding cells of testis
   d. Adrenal gland
   e. Thyroid gland

2. The enzyme present in acrosome responsible for the opening pathways between the granulosa cells so that sperm can reach the ovum, is:

   a. Lipase
   b. Sucrase
   c. Amylase
   d. Lactase
   e. Hyaluronidase

3. The normal stimulus that causes the test is to descend into the scrotum from abdomen is:

   a. Testosterone secreted by fetal testes
   b. Aldosterone
   c. ADH
   d. Fetal cortisol
   e. Growth hormone

4. The function of testosterone in male includes:

   a. It increases protein formation & muscle development
   b. It decreases thickness of skin
   c. It decreases red blood cells
   d. It decreases basal metabolic rate
   e. It decreases reabsorption of sodium in distal tubule

5. Increased secretion by the fallopian tubules is promoted by:

   a. Estrogen
   b. Prolactin
   c. Progesterone
   d. Oxytocin
   e. Testosterone

RAWALPINDI MEDICAL UNIVERSITY
DEPARTMENT OF PHYSIOLOGY
REPRODUCTION MODULE SEQs SECOND YEAR MBBS

Q.1 A 35 year old male known athlete, used testosterone to improve work performance and muscle mass.

a. How testosterone is secreted in males? (2)
b. Explain the feedback regulation of hypothalamic-pituitary testicular axis. (3)

Q.2 Explain the hormonal changes during normal female monthly cycle with the help of graph. (2,3)

Q.3 A 25 year old obese female married for 2 years, presented with complaints of primary infertility. Her labs were performed. Hormonal profile showed raised LH and reduced FSH levels. Scan revealed multiple cysts in ovaries confirming the diagnosis of polycystic ovarian syndrome.

a. Explain the mechanism of ovulation. (2)
b. Briefly explain the phases of ovarian cycle. (3)

Q.4 A 55 years old female presented to OPD with complaints of hot flashes, insomnia and mood disturbances. The examining doctor counseled her about her menopause and related symptoms.

a. What are the effects of estrogen on primary and secondary sexual characteristics? (2)
b. Enlist the effects of deficiency of estrogen. (3)

Q.5 A 26 years old female presented with complaints of missed periods. Her pregnancy test came out be positive.

a. Name the hormone detected in urine pregnancy test. (1)
b. Explain the functions of this hormone. (2.5)
c. Enlist the hormones secreted by the placenta. (1.5)

RAWALPINDI MEDICAL UNIVERSITY DEPARTMENT OF BIOCHEMISTRY
2ND YEAR MBBS
REPRODUCTION MODULE

1. Which one of the following Nitrogenous base is absent in DNA?
   a. Adenine
   b. Guanine
   c. Uracil
   d. Thymine
   e. Cytosine

2. End product of Purine degradation is:
   a. Urea
   b. Uric acid
   c. Ammonia
   d. Allantoin
   e. Pyruvate

3. Following is the cause main clinical feature of Gout:
   a. Photosensitivity
   b. Arthritis
   c. Immunodeficiency
   d. Jaundice
   e. Anemia

4. Following statement is true regarding Testosterone:
   a. It is produced by Ovaries
   b. Acts on the liver and adipose tissue
   c. Receptors are present on the cell surface
   d. It is a steroid hormone
   e. Transported as free hormone in the plasma

SEQ

Q. a. Explain steps of synthesis of estrogen. 2.5

b. Discuss causes of hyperuricemia. 2.5

RAWALPINDI MEDICAL UNIVERSITY DEPARTMENT OF BIOETHICS
2ND YEAR MBBS
REPRODUCTION MODULE

1. ----Includes rules of conduct that may be used to regulate our activities concerning the biological world.
   a. Bio-piracy
   b. Biosafety
   c. Bioethics
   d. Bio-patents
   e. Bio-logistic

2. The right of patients having self-decision is called.
   a. Justice
   b. Autonomy
   c. Beneficence
   d. Veracity
   e. Fidelity

3. Following is not code of ethics.
   a. Integrity
   b. Objectivity
   c. Confidentiality
   d. Behaviour
   e. Autonomy

4. -------in the context of medical ethics, if it's fair and balanced
   a. Justice
   b. Autonomy
   c. Beneficence
   d. Veracity
   e. Fidelity

5. ------Principle requiring that physicians provide, positive benefits
   a. Justice
   b. Autonomy
   c. Beneficence
   d. Veracity
   e. Fidelity