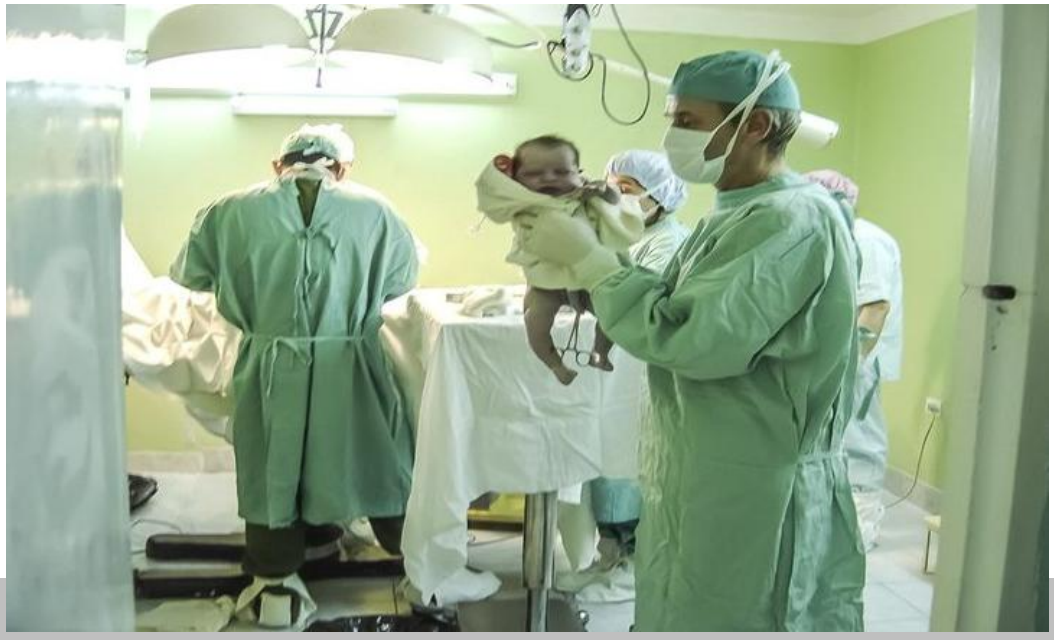
College of Medicine
Department of Medical Education
Curriculum Development & Research Unit



STUDENT'S BOOK

REPRODUCTION BLOCK (REPR 224)

YEAR 2 (MALE A)

2017-2018
(1438-1439)

COLLEGE OF MEDICINE
Department of Medical Education
Curriculum Development & Research Unit

THE REPRODUCTION BLOCK

Year Two

BLOCK BOOK AND STUDENT GUIDE

MALE A

(11 March 2018 to 15 May 2018)

(2017-2018) 1438-1439

WELCOME ADDRESS

Dear Students,

We are pleased to welcome you in the college of Medicine, Endocrine Block attachment. We hope you will find this block both useful and enjoyable.

A message from the Dean

We are pleased with your progress in the medical program and your achievements. Being a second year medical students is a great opportunity for you to consolidate what you have learnt in the preparatory year and prepares you for the clinical skills and competencies needed in the clinical years. The Department of Medical Education through its different units is working hard to create an integrated and innovative curriculum that builds on the changes introduced in the preclinical years and enforces best teaching/learning approaches in the design of the new medical curriculum. As you are aware, the College of Medicine at King Saud University is one of the best colleges not just in the Kingdom of Saudi Arabia but proved to be one of the best in the gulf region, and the Middle East. It also has its international influence among the best colleges of medicine worldwide. This makes us proud of our achievements and provides you with an insight about the quality of teaching and research that we have reached and our continuous work to maintain our standards.

Therefore, the medical curriculum aims at preparing you and equipping you with the best training and clinical skills to become a medical graduate that fulfills the highest international standards. Therefore, the focus of the curriculum is to enhance a number of skills such as case-based learning, critical thinking, self-directed learning, deep understanding of concepts, application of knowledge learnt, and how to make decisions on the basis of evidence. The curriculum also aims at enhancing your skills in areas such as professionalism, e-learning, task-based learning, and preparing you for life-long learning. The design of the curriculum encourages small group learning, use of cases for discussion, lectures, student-led seminars, bed-side teaching, task-based learning, use of multimedia and e–learning as modes for teaching and learning. The use of wide range of teaching and learning modes and small group discussion will help you to become active learners, and work with other students in your group as a team.

I wish you all the best during your academic year and would encourage all of you to get the best out of the teaching and learning opportunities provided to you during this year. Our teaching staff and clinicians would be very happy to help you on any issue that you need help with.

Professor Khalid A Fouda Neel

Dean, College of Medicine and the Supervisor of University Hospitals

A Message from the Vice Dean for Academic Affairs

It is my pleasure to welcome you all to the second year of Medicine. I would like to take this opportunity to congratulate you all on your success and achievements. There is no doubt that you have worked hard during the first year to adapt to the university system and our new integrated curriculum. In the mean time, we would like you to remember that success is not a destination, success is a journey and there will be many challenges during your journey of success. A successful person would turn these challenges into opportunities for success.

As you might be aware, our faculty under the leadership of our Dean is moving into an integrated curriculum that encourages small group learning and student-centered approaches for learning. To achieve these goals we have established the Department of Medical Education under the leadership of Dr. Mona Soliman and his teams to develop the new integrated curriculum. The design of the new curriculum is focused on the students not the teachers. Our aim is to equip each of you with the current teaching and learning strategies that are used in the best universities worldwide and ensure that you will be an excellent medical doctor who will be committed to the profession and willing to serve patients in our country, our region, and wherever our government and our professional bodies would ask you for help.

On these bases, our aim is not just to graduate more doctors; our aim is to ensure that doctors graduating from our university are equipped with knowledge, skills, behavior, and competencies needed for best practice of medicine anywhere in the world. This goal makes a lot of responsibility from your end and we would like you to take this opportunity and work effectively to achieve your goals. Our academic and clinical staff are expert in their areas and very eager to help and support you to achieve your dreams. I would encourage you to ask for help when needed and our support team would work with you on any challenges you might face during the course. I wish you all the best.

Dr. Saleh Adhehri
Vice Dean for Academic Affairs
College of Medicine

A Message from the Reproduction System Block Chair

It gives me a great pleasure to welcome you to the Reproductive Block. The committee of this block has ensured that knowledge and skills in relation to basic sciences including anatomy, physiology, biochemistry, pathology, microbiology, pharmacology and genetics have been addressed in an integrated way to meet your needs for understanding the reproductive system. There are also a number of sessions addressing professionalism and professional attitude. The block endorses the same teaching and learning strategies used in other blocks including: small group learning, lectures, integrated practical classes, interactive sessions, and introduction to clinical medicine. The week of integrated clinical skills (week 6) aims at providing you with the opportunity to develop your skills in relation to obstetric and gynaecological examination through using manikins. This component is provided by the Department of Medical Education. This session will help you to strengthen your theoretical understanding and clinical practice and will also help you to overcome some of the limitation of examining clinical patient during your clinical years.

We wish you the best of luck in all the aspects of your learning process.

Prof. Malak AlHakeem

Reproduction Block Chair

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General Information

Block Title	Reproduction System
Block Code & Number	REPR 224
Credit Hour	6
Block Duration	6 Weeks
Block Dates	11th March 2018 to 15th May 2018
Block Chairman	Prof. Malak Al Hakeem
Block Co-Chair	Prof. Saeed Abumakarem
Members of the Committee	Prof. Samy Azer
	Dr. Mohammed Alotaibi
	Dr. Sumbul Fatma
	Dr. Tariq Aljohani
	Dr. Mona Badr
	Prof. Zhahid Shakoor
	Prof. Mohammed Alhumayyd

List of the teaching staff
Year 2 – Male A

Department	Name	Mobile	E-Mail
Anatomy	Prof. Saeed Abuelmakarem	0556439341	sabuelmakarem@ksu.edu.sa; saeedmakarem@hotmail.com
	Prof. Ahmed Fathalla	0501562983	ahmedfathalla@gmail.com
	Dr. Mohammed Vohra	0508845648	vohra@ksu.edu.sa
	Dr. Aly Mohamed	0556751503	alymahmed53@hotmail.com
	Dr. Essam Aldin Salama	0592871734	Essamco58@gmail.com
Histology	Dr. Aly Mohammed	0556751503	alymahmed53@hotmail.com
	Prof. Saeed Abuelmakarem	0556439341	sabuelmakarem@ksu.edu.sa; saeedmakarem@hotmail.com
Physiology	Dr. Mohammed Al Otaibi	0504225889	mfalotaibi@ksu.edu.sa
	Dr. Khalid Al Regaiey	0505535005	kalregai@gmail.com
Pathology	Prof. Ammar Al-Rikabi	0541842840	rikabi@ksu.edu.sa
	Dr. Tariq Aljohani	0505473108	tariqjo@yahoo.com
	Dr. Abdullah Basabien	0507705818	a.basabien@gmail.com / absabein@ksu.edu.sa
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	Dr. Ahmed Mujammami	Ext. 79512	mujammmi@gmail.com /aamujammami@ksu.edu.sa
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	Dr. Ishfaq Bukhari	0545507838	ishfaqbukhari@yahoo.com / iabukhari@ksu.edu.sa
	Dr. Saeed Ahmed Al Shiekh	Ext. 71351	saeedahmedshk@yahoo.com
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	Dr. Syed Irfan	0565046182	rfankarim1969@gmail.com
Patient Safety	Dr. Ahmed Aboshaiqah		
	Hospital Infection Control Team		
	Dr. Yasser Sabr		
	Dr. Ishfaq Bukhari	0534761466	iabukhari@ksu.edu.sa

List of the Problem-Based Learning Cases

The table below summarizes the PBL cases to be discussed in the Reproduction System Block.

Week	Case Number	Case Title
W1 (Monday & Thursday)	Case 1	**"**Am I different!!"
W2 (Monday & Thursday)	Case 2	"None working for us!!"
W3	**NO CASE**	
W 4 (Monday & Thursday)	Case 3	"What options do I have?"
W 5 (Monday & Thursday)	Case 4	"What should I do?"

Instructions:

The cases listed above will be discussed by students in their small groups. Each group is about 8 to 12 students. Each case will be discussed in two tutorials, on Sunday and Wednesday. Each tutorial is two hours long.

Attendance of Small Group Learning tutorials:

Students must attend all small group learning tutorials. If a student is not well, she needs to provide a medical certificate from their family doctor. If a student misses out to attend four tutorials without acceptable reason, she might not be allowed to attend the final examination.

Students Roles in Small Group Learning Tutorials:

The design of the curriculum encourages small group discussion and student-centred learning. To achieve these goals there is a need for establishing good group dynamics, interpersonal skills, and effective communication. These elements will ensure that learning is an enjoyable process and rewarding to each member in the group. Therefore, students play a vital role in making a difference in their groups. To achieve these changes and improve your learning outcomes, We recommend that you use the paper by Professor Samy Azer, titled "Becoming a Student in a PBL Tutorial", a copy is enclosed in the Appendix. Your continuous reflection on these tips and working on identifying your role in your group will help you in reaching these goals and building up your group.

General Learning Objectives

By the end of this block the students should be able to:

1. Understand the anatomical structures of the male and female reproductive system and their functions.
2. Understand the pathology, microbiology and pathogenesis of common diseases of the male and female reproductive system.
3. Understand the physiological role of the hypothalamic-pituitary-gonadal axis in the male and female reproductive systems.
4. Understand the physiology of puberty and associated psychological changes.
5. Understand the anatomy and physiology of the breast and its normal development and the pathogenesis of breast cancer.
6. Understand the microbiology and immunology of sexually transmitted disease with an emphasis on common diseases and AIDS.
7. Discuss the physiology of normal pregnancy and lactation with a focus on ante-natal care.
8. Use knowledge from basic sciences to interpret symptoms, signs and investigation of patients with common diseases affecting the reproductive system.
9. Discuss the pharmacological basis of drugs used in the treatment common diseases affecting the reproductive system and the use of pharmacological and non-pharmacological methods in contraception.
10. Discuss the development of the normal embryo and factors that can affect the development of congenital anomalies with particular emphasis on drugs, infections and environmental factors.
11. Develop their communication skills with patient's ante-natal care, contraceptives, and breast self examination.

1.0 Knowledge

1.1 Describe the gross anatomy and the ultrastructure of male and female reproduction systems and correlate the anatomical structures to their functions.

1.2 Outline the development and the embryology of the male and female reproduction systems and common anomalies that may affect these systems.

1.3 Describe the anatomy of the pelvic floor muscles (origin, insertions, nerve supply, blood supply, and function) and discuss their clinical significance.

1.4 Discuss the peritoneal coverings, blood supply, nerve supply, and lymphatic drainage of the different structures of the male and female genital systems.

1.5 Discuss the development of normal embryo and the factors that can result in the development of congenital anomalies with particular emphasis on drugs, infections, and environmental factors.

1.6 Discuss the physiological role of the hypothalamic-pituitary-gonadal axis in the regulation of the functions of the male and female reproduction systems with an emphasis on the ovarian and menstrual cycle in females and spermatogenesis in males.

1.7 Discuss the physiology of puberty and associated psychological changes, and the biochemistry of the hormonal changes in males and females during puberty and their regulatory mechanisms.

1.8 Discuss the microbiology, pathology and immunology of sexually transmitted diseases including AIDS and discuss the application of knowledge to the patients and the community.

1.9 Discuss the pathology and the pathogenesis of common cancers affecting female and male reproduction systems including: ovarian cancer, uterine cancer, cervical cancer, testicular cancer and breast cancer.

1.10 Discuss the physiological basis of drugs used in the treatment of common diseases affecting the reproduction system including drugs used in induction of ovulation, hormone replacement therapy, chemotherapy and the use of pharmacological and non-pharmacological methods in contraception.

1.11 Discuss and apply the principles of self-directed learning.

1.12 Discuss the role of social, cultural, behavioural and genetic factors in the development of diseases affecting the reproduction system.

1.13 Discuss the impact of infertility on the patient and family.

1.14 Briefly discuss health promotion, health education, and prevention of diseases affecting the reproduction system.

2.0 Cognitive Skills

2.1 Identify problems, generate hypotheses, make an enquiry plan, weigh evidence for and against a hypothesis, and make a decision on the basis of available evidence.

2.2 Apply knowledge learnt from anatomy, physiology, biochemistry, pathology, microbiology, and pharmacology to problem-based learning cases and use knowledge learnt to justify their views and in making decisions.

2.3 Use available information to differentiate between normal and abnormal changes (e.g., delay in menarche in a female due to stress or psychosocial pressures versus due to pathological causes).

2.4 Identify learning needs, search for new information and use new information to solve problems.

2.5 Work out how to handle uncertainty and decide on appropriate approaches to handle such situation.

2.6 Integrate knowledge learnt from different disciplines such as anatomy, physiology, biochemistry, pathology, and pharmacology to discuss a problem, make priorities, and define their action plan and learning needs.

3.0 Interpersonal Skills & Responsibility

3.1 Communicate effectively and demonstrate the ability to build rapport, work as a member of a small group and contribute to the learning of others.
3.2 Demonstrate the ability to monitor their progress, apply time management rules, and use feedback in improving their performance.
3.3 Demonstrate the ability to take medical history from patients and demonstrate the ability to present their findings, and communicate with patients using simple language without technical jargon.
3.4 Demonstrate accountability in their work with others in small groups (e.g., in problem-based learning).

4.0 Communication, Information Technology, Numerical

4.1 Use computer programs in searching for new information, sharing information and analyzing data.

5.0 Psychomotor Skills

5.1 Demonstrate the ability to take history from patients with common diseases affecting the reproduction system.

5.2 Demonstrate the ability to conduct clinical examination of the reproduction system and demonstrate the ability to show correct techniques, correct sequence of examination.

Teaching and Learning Modes:

In an integrated curriculum like our curriculum, we use a wide range of teaching and learning strategies to ensure that learning meets the different needs of the students. These strategies include:

- Small group session.
- Lectures.
- Seminars.
- Laboratory based practical Class.
- Clinical skills Center.
- Independent learning.
- E-learning & Multimedia

Title of the lecture	Female reproductive system
Lecturer's name	Prof. Ahmaed Fathalla
Department	Anatomy
Block / week	Reproduction block/ week 1
Email address	ahmedfathala@gmail.com

Objectives:

At the end of the lecture students should know;

- List the organs of female reproductive system.
- Describe the pelvic peritoneum in female.
- Describe the position and relations of the ovaries.
- List the parts of the uterine tube.
- Describe the anatomy of uterus regarding: subdivisions, cavity, relations, ligaments & main support.
- Describe the anatomy of vagina regarding: structure, extent, length & relations.
- Describe the supply (arteries, veins, lymph, nerves) of female reproductive system.

Keywords:

Uterus, vagina, cervix, pelvic peritoneal, ovaries, uterine tubes, uterine ligaments, blood supply, nerve supply, lymphatics.

Title of the lecture: Development of female reproductive system	
Lecturer's name	Dr. Essam Salama
Department	Anatomy
Block / week	Reproduction block/ week 1
Email address	Essamco58@gmail.com

Objectives:

At the end of the lecture students should know;

- Describe the development of gonads (indifferent& different stages)
- Describe the development of the female gonad (ovary).
- Describe the development of the internal genital organs (uterine tubes, uterus & vagina).
- Describe the development of the external genitalia.
- List the main congenital anomalies.

Title of the lecture: **Female perineum & external genitalia**	
Lecturer's name	Dr. Mohammed Vohra
Department	Anatomy
Block / week	Reproduction block/ week 1
Email address	vohra@ksu.edu.sa

Objectives:

At the end of the lecture students should know;

- Boundaries of the perineum.
- Division of perineum into two triangles.
- Boundaries & Contents of anal & urogenital triangles.
- Lower part of anal canal.
- Boundaries & contents of Ischiorectal fossa.
- Innervation, Blood supply and lymphatic drainage of perineum.

Title of the lecture: **Histology of female reproductive system**	
Lecturer's name	Dr. Aly Mohammed
Department	Anatomy
Block / week	Reproduction block/ week 1
Email address	Alymahmed53@hotmail.com

Objectives:

At the end of the lecture students should know;

- Describe the histological structure and fate of ovarian follicles.
- Describe the histological structure of:
    - Ovary.
    - Oviducts (Fallopian tubes).
    - Uterus.
    - Vagina.
    - Placenta.
    - Resting and lactating mammary gland.

Title of the lecture: **Anatomy of the female pelvis**	
Lecturer's name	Prof. Saeed Abeulmakarem
Department	Anatomy
Block / week	Reproduction block/ week 1
Email address	sabuelmakarem@ksu.edu.sa ; saeedmakarem@hotmail.com

Objectives:

At the end of the lecture students should know;

- Describe the anatomy of the pelvis regarding (bones, joints & muscles).
- Describe the boundaries and subdivisions of the pelvis.
- Differentiate the different types of the female pelvis.
- Describe the pelvic walls & floor.
- Describe the components & function of the pelvic diaphragm.
- List the arterial & nerve supply of the pelvis.
- List the lymph & venous drainage of the pelvis.

Title of the lecture:	**Hypothalamic & Pituitary gonadal axis**
Lecturer's name	Dr. Khalid Al Regaiey
Department	Physiology
Block / week	Reproduction block/ 1
Email address	kalregai@gmail.com

Objectives:

At the end of the lecture, students should be able to know and understand the:

- Define hypothalamic-pituitary –gonadal axis (HPG)
- Name the hormones and target tissues of the HPG axis.
- Describe the role of (HPG) hormones in the development of the fetal reproductive organs.
- Describe the feedback mechanisms in the hypothalamic-pituitary-gonadal axis and their importance in the control of reproductive function.
- Outline the endocrine regulation of testicular function: the role of GnRH, FSH, LH, testosterone, and inhibin.
- Outline the endocrine regulation of ovarian function: the role of GnRH, FSH, LH, estrogen, Progesterone, and inhibin.

Title of the lecture:	**Physiology of Ovarian Cycle**
Lecturer's name	Dr. Mohammed Alotaibi
Department	Physiology
Block / week	Reproduction block/ 1
Email address	mfalotaibi@ksu.edu.sa

Objectives:

At the end of the lecture, students should be able to know and understand the:

- Recognize the hypothalamic- *pituitary-ovarian-axi*s
- Describe the physiological phases of ovarian cycles
- Describe the changes that occur in the ovaries leading to ovulation
- Describe the development and the fate of corpus luteum

Title of the lecture: Physiology of Uterine Cycle	
Lecturer's name	Dr. Mohammed Alotaibi
Department	Physiology
Block / week	Reproduction block/ 1
Email address	mfalotaibi@ksu.edu.sa

Objectives:

At the end of the lecture, students should be able to know and understand the:

- Describe the normal phases of menstrual cycle
- Discuss the ***structural changes*** that occur in the endometrium during the menstrual cycle and explain how these changes are hormonally controlled
- List the hormones of female reproduction and describe their physiological functions
- Describe the physiology of menopause and the disorders of menstruation

Title of the lecture: Endometrial hyperplasia, uterine cancer and fibroids (leiomyomas)	
Lecturer's name	Dr. Tariq Al Johani
Department	Pathology
Block / week	Reproduction block / 1
Email address	tariqjo@yahoo.com

Objectives:

At the end of this lecture, the student should be able to:

- Know the risk factors, clinical presentation, macroscopic and histological features of endometrial hyperplasia and carcinoma.
- Understand the pathology and clinical features of uterine leiomyomas.
- Is aware that leiomyoma (fibroid) is the commonest neoplasm arising in the female genital tract.

Title of the lecture:	Pathology female reproductive organs - Practical
Lecturer's name	Dr. Abdullah Basabein / Dr. Tariq AlJohani
Department	Pathology
Block / week	Reproduction block/ week 1
Email address	

Objectives:

At the end of the lecture students should know;

- Know the normal structure of the male and female genital systems.
- Acquire the knowledge about the gross appearances and histopathological features of the following diseases in the Male and Female genital systems and breast.
    - Uterine Leiomyomata.
    - Endometrial hyperplasia and carcinoma.
    - Endometriosis.
    - Cervical dysplasia and carcinoma.
    - Acute salpingitis.

Title of the lecture: Ovarian cysts and ovarian tumours.	
Lecturer's name	Dr. Tariq Al Johani
Department	Pathology
Block / week	Reproduction block / 1
Email address	tariqjo@yahoo.com

Objectives:

At the end of this lecture, the student should be able to:

- The pathology of the major types of ovarian cysts (follicular and luteal).
- The classification and pathology of common ovarian tumours including surface epithelial, germ cell, stromal and metastatic neoplasms.

Title of the lecture:	Congenital adrenal hyperplasia syndrome and testicular fertilization
Lecturer's name	Dr. Ahmed Mujammami
Department	Biochemistry (Pathology)
Block / week	Reproduction block/ week 2
Email address	ugsearch@hotmail.com

Objectives:

At the end of the lecture students should know;

- Adrenal steroidogenesis.
- The biochemical characteristics, types and clinical manisfestations of Congenital adrenal hyperplasia syndrome and Testicular feminization syndrome

Keywords:

- Steroidogenesis, hermaphrodite, glucocorticoids, mineralcocorticoids, virilization, 21-a-hydrolyase, 11-b-hydroxylase, 17-hydroxyprogesterone, 11-deoxycortisol, aromatase

Background:

- The term congenital adrenal hyperplasia (CAH) encompasses a group of autosomal recessive disorders, each of which involves a deficiency of an enzyme involved in the synthesis of cortisol, aldosterone, or both.
- Testicular Feminization Syndrome is a genetic disorder that makes XY fetuses insensitive (unresponsive) to androgens (male hormones). Instead, they are born looking externally like normal girls. Internally, there is a short blind-pouch vagina and no uterus, fallopian tubes or ovaries. There are testes in the abdomen or the inguinal canal.

Main concepts in the lecture:

- The different secretory zones of adrenal glands
- Hermaphroditism or Intersex
- Glucocorticoids & Mineralocorticoids
- Biochemistry of Congenital Adrenal Hyperplasia (CAH) Syndromes
- Different types of CAH syndromes

- 21 α-Hydroxylase Deficiency is most common type of CAH syndrome
- Genetics of 21 α-Hydroxylase Deficiency
- 21 α-Hydroxylase Deficiency: Diagnosis
- 11 β -Hydroxylase Deficiency
- TFS as a Disorders of Male Sexual Differentiation
- Control of testicular function by the gonadotrophins
- Clinical picture of Complete and partial androgen insensitivity syndrome CAIS/PAIS)
- Laboratory diagnosis of TFS

Take home messages:

- The adrenal glands comprise 3 separate hormone systems
- True hermaphrodite have ovary plus testis, Female pseudohermaphrodite (FPH)- only ovary and Male pseudohermaphrodite (MPH)- only testis
- CAS is the result of an inherited enzyme defect in steroid biosynthesis
    - ↑ plasma [17-hydroxyprogesterone] as early as 4 days after birth indicates 21- α-Hydroxylase Deficiency
- 21 α-Hydroxylase Deficiency involves mutations in CYP21 gene
- Classic (complete) deficiency of 21 α-Hydroxylase is characterized by markedly elevated serum levels of 17-hydroxyprogesterone, Late-onset (partial) deficiency may require corticotropin (ACTH) stimulation test
- 11 β -Hydroxylase Deficiency Leads to high levels of 11-deoxy-corticosterone with mineralocorticoid effect (salt and water retention)
- Testicular feminization syndrome is due to impaired testosterone production
- Testicular function is under the Control of gonadotrophins and is inhibited by inhibin and testosterone
- In peripheral tissue, increased amounts of testosterone will be converted by aromatase into estradiol and that leads to feminization
- PAIS includes mildly virilized female external genitalia (clitorimegaly without other external anomalies) to mildly undervirilized male external genitalia (hypospadias and/or diminished penile size)

- CAIS have female external genitalia with normal labia, clitoris, and vaginal introitus (MPH)
- Laboratory diagnosis of TFS includes – Karyotyping to differentiate an undermasculinized male from a masculinized female. FISH to detect the presence of a Y chromosome and Increased (or normal) testosterone and dihydrotestosterone blood levels and imaging studies etc.

Further reading:

- Clinical Chemistry: An illustrated colored text
- Lecture Notes in Clinical Biochemistry

Title of the lecture:	**Male reproductive system**
Lecturer's name	Prof. Saeed Abuelmakarem
Department	Anatomy
Block / week	Reproduction block/ week 2
Email address	sabuelmakarem@hotmail.com ; saeedmakarem@hotmail.com

Objectives:

At the end of the lecture students should know;

- Microscopic structure of: Testis, epididymis, Vas deferens, Seminal vesicles and Prostate.

Title of the lecture:	**Anatomy of the male reproductive organ**
Lecturer's name	Prof. Saeed Abuelmakarem
Department	Anatomy
Block / week	Reproduction block/ week 2
Email address	sabuelmakarem@ksu.edu.sa; saeedmakarem@hotmail.com

Objectives:

At the end of the lecture students should know;

- List the different components of the male reproductive system.
- Describe the anatomy of the primary and the secondary sex organs regarding: (location, function, structure, blood supply & lymphatic drainage).
- Describe the anatomy of the male external genital organs.

Title of the lecture:	Development of the male reproductive organs
Lecturer's name	Prof. Ahmed Fathalla
Department	Anatomy
Block / week	Reproduction block/ week 2
Email address	ahmedfathala@gmail.com

Objectives:

At the end of the lecture students should know;

- List the causes of differentiation of genitalia into the male type.
- Describe the origin of each part of the male internal & external genitalia.
- List the causes & describe the events of descent of testis.
- List the common anomalies of male genital system & describe the causes of each of them.

Title of the lecture:	Physiology of Uterine Cycle
Lecturer's name	Dr. Mohammed Alotaibi
Department	Physiology
Block / week	Reproduction block/ 2
Email address	mfalotaibi@ksu.edu.sa

Objectives:

At the end of the lecture, students should be able to know and understand the:

- Describe the normal phases of menstrual cycle
- Discuss the ***structural changes*** that occur in the endometrium during the menstrual cycle and explain how these changes are hormonally controlled
- List the hormones of female reproduction and describe their physiological functions
- Describe the physiology of menopause and the disorders of menstruation

Title of the lecture:	Physiology of androgens & control of male sexual functions
Lecturer's name	Dr. Khalid Al Regaiey
Department	Physiology
Block / week	Reproduction block/ 2
Email address	kalregai@gmail.com

Objectives:

At the end of the lecture, students should be able to know and understand the:

- Describe the physiological functions of the major components of the male reproductive tract.
- Describe spermatogenesis and the role of Sertoli cells, Leydig cells in this process.
- Discuss the sources and functions of semen.
- Describe the, biosynthesis, mechanism of transport within the blood, metabolism and elimination of testosterone and related androgens.
- Describe the actions and cellular mechanisms of testosterone and related androgens.
- Describe the phases of the male sexual response.
- Identify the causes and consequences of over-secretion and under-secretion of testosterone for a) prepubertal and b) postpubescent males.

Title of the lecture:	Puberty in males and females
Lecturer's name	Dr. Mohammed Alotaibi
Department	Physiology
Block / week	Reproduction block/ 2
Email address	mfalotaibi@ksu.edu.sa

Objectives:

At the end of the lecture, students should be able to know and understand the:

- Define Puberty
- Recognize the physiology of puberty related to changes in hypothalamic-pituitary-gonadal axis
- Describe the physical changes that occur at puberty in males and females
- Describe the pathophysiological conditions associated with puberty

Title of the lecture: Diseases of the epididymis and testicular tumour	
Lecturer's name	Dr. Tariq AlJohani
Department	Pathology
Block / week	Reproduction block / 2
Email address	tariqjo@yahoo.com

Objectives:

At the end of this lecture, the student should be able to:

- Have a working knowledge of the normal histology of the testis and epididymis.
- Know the predisposing factors and pathology of epididymitis.
- Be familiar with the basic classification and pathology of testicular tumours with special emphasis on seminoma, yolk sac tumour, embryonal carcinoma and teratoma.

Title of the lecture: Prostatic hyperplasia and cancer of prostate	
Lecturer's name	Dr. Tariq Al Johani
Department	Pathology
Block / week	Reproduction block / 2
Email address	tariqjo@yahoo.com

Objectives:

At the end of this lecture, the student should be able to:

- Understand the basic anatomical relations and zones of the prostatic gland.
- Know the epidemiology, pathogenesis and histopathologic features of benign prostatic hyperplasia and carcinoma of the prostate.

Title of the lecture:	Pathology male reproductive organs - Practical
Lecturer's name	Dr. Abdulkarim Al Heetel
Department	Pathology
Block / week	Reproduction block/ week 2
Email address	aalhetheel@ksu.edu.sa

Objectives:

At the end of the lecture students should know;

- Know the normal structure of the male and female genital systems.
- Acquire the knowledge about the gross appearances and histopathological features of the following diseases in the Male and Female genital systems and breast.
    - Testicular Atrophy.
    - Seminoma of the testis.
    - Embryonal carcinoma and teratoma of testis.
    - Prostatic Hyperplasia.
    - Adenocarcinoma of the prostate.

Title of the lecture:	Investigating the infertile couple
Lecturer's name	Dr. Usman Ghani
Department	Anatomy
Block / week	Reproduction block/ week 2
Email address	ugsearch@hotmail.com

Objectives:

At the end of the lecture students should know;

- Identify the causes of infertility in men and women.
- Understand the diagnostic approaches to infertility in men and women.
- Interpret the results of investigation of infertility in men and women

Keywords:

- Infertility, endocrine, progesterone, ovulation, LH, FSH, ovarian failure, hyperprolactinemia, obesity, insulin resistance, androgens, hypogonadotrophic hypogonadism, anti-mullerian hormone, sperm count, testosterone, testicular failure

Background:

- Infertility is failure to conceive after one year of regular unprotected sexual intercourse
- There are numerous causes of infertility in men and women.
- The endocrine causes of infertility are more commonly found in women than men.

Main concepts in the lecture:

Infertility or subfertility is the inability of a couple to conceive despite having regular sexual intercourse at least for a year. Infertility can manifest both in men and women. A number of contributing factors affect fertility; these include congenital abnormalities, underlying disease, use of contraceptives and frequency of intercourse. The endocrine causes of infertility in women are more common than in men, which include elevated levels of androgens as observed in obesity and insulin resistance, primary ovarian failure, PCOS and hyperprolactinemia, Cushing's syndrome, galactorrhea, and hypogonadotrophic hypogonadism. Determining the status of ovulation is very important during investigation. Ovulation along with elevated progesterone levels indicates fertility, which usually warrants no further investigations. Other investigations include measuring LH, FSH, prolactin and anti-mullerian hormone.

Endocrine causes of infertility in men are rare. No further investigations are required for eugonadal men with normal sperm count and quality. However, measurement of testosterone and gonadotrophins are recommended for hypogonadal men. Causes of infertility in men may include hypothalamic-pituitary disease and primary testicular failure that manifests as hypogonadotrophic hypogonadism. Hyperprolactinemia leading to infertility is more common in women than men.

Conclusion:

- Endocrine causes of infertility are more common in women than men.
- In women serum progesterone >30nmol/L indicates ovulation.
- Serum FSH >25U/L indicates primary gonadal failure in both sexes.
- Hyperprolactinemia is a rare cause of male infertility.

Take home messages:

- Endocrine causes of infertility are more common in women than men
- In women serum progesterone >30 nmol/L indicates ovulation
- Hyperprolactinemia is a rare cause of male infertility

Further reading:

- Clinical Biochemistry: An Illustrated Colour Text by Allan Gaw, 5th Edition, pp 102 and 84, Churchill Livingstone, UK.
- Gasparin, AA et al. Anti-müllerian hormone levels as a predictor of ovarian reserve in systemic lupus erythematosus patients: a review. *Rev. Brasil. Reumatol*. 2015; 55: 363-367.

Title of the lecture: **Medication affecting erectile dysfunction**	
Lecturer's name	Dr. Ishfaq Bukhari
Department	Pharmacology
Block / week	Reproduction block / 2
Email address	iabukhari@ksu.edu.sa

Objectives:

- By the end of this lecture you will be able to:
- Revise the haemodynamic changes inducing normal erection
- Interpret its different molecular control mechanisms
- Define erectile dysfunction [ED] and enumerate its varied risks
- List drugs inducing ED and reflect on some underlying mechanisms
- Correlate drugs used in treatment of ED to the etiopathogenesis
- Classify oral 1st line therapy relevent to; Mechanism / Utility / ADRs
- Compare the pharmacological difference of PDE_5 inhibitors
- Study the transurethral, intracavernous or topical 2nd line therapies; Mechanism / Utility / ADRs
- Enumerate lines of treatment of priapism

Title of the lecture: **Placenta**	
Lecturer's name	Dr. Mohammed Vohra
Department	Anatomy
Block / week	Reproduction block/ week 3
Email address	vohra@ksu.edu.sa

Objectives:

At the end of the lecture students should know;

- Describe the formation of the placenta.
- Describe the shape and surfaces of the placenta.
- Structure of the cotyledon and intervellous space.
- Describe placental circulation.
- Describe the function of the placenta
- List the most common placental anomalies.

Title of the lecture:	Fetal circulations
Lecturer's name	Prof. Saeed Abuelmakarem
Department	Anatomy
Block / week	Reproduction block/ week 3
Email address	sabeulmakarem@ksu.edu.sa ; saeedmakarem@hotmail.com

Objectives:

At the end of the lecture students should know;

- Describe the fetal circulation.
- List the important structures which covers the fetal circulation.
- List the adult derivatives of the important components of the fetal circulation, (foramen ovale, ductus venosus, ductus arteriosus, umbilical vein, and umbilical arteries).

Title of the lecture:	Physiology of Pregnancy
Lecturer's name	Dr. Mohammed Alotaibi
Department	Physiology
Block / week	Reproduction block/ 3
Email address	mfalotaibi@ksu.edu.sa

Objectives:

At the end of the lecture, students should be able to know and understand the:

- Describe fertilization and the implantation of the blastocyst in the uterus
- Recognize the development and the normal physiology of the placenta
- Describe the physiological functions of placental hormones during pregnancy
- Explain the physiological response of mother's body to pregnancy

Title of the lecture:	Physiology of Labor
Lecturer's name	Dr. Mohammed Alotaibi
Department	Physiology
Block / week	Reproduction block/ 3
Email address	mfalotaibi@ksu.edu.sa

Objectives:

At the end of the lecture, students should be able to know and understand the:

- Define labor/labour (parturition)
- Recognize the factors triggering the onset of labor
- Describe the hormonal changes that occur before and during labor
- Describe the phases of uterine activity during pregnancy and labor
- Know the clinical stages of labor

Title of the lecture: Pathology of the uterine cervix	
Lecturer's name	Dr. Tariq Al Johani
Department	Pathology
Block / week	Reproduction block / 3
Email address	tariqjo@yahoo.com

Objectives:

At the end of this lecture, the student should be able to:

- Understand the concepts of dysplasia and intraepithelial neoplasia in the female genital tract and the role of a cervical screening programme.
- Know the incidence, risk factors, clinical presentation, pathological features and prognosis of cervical squamous cell carcinoma.

Title of the lecture: Pathology of trophoblastic diseases.	
Lecturer's name	Dr. Tariq Al Johani
Department	Pathology
Block / week	Reproduction block / 3
Email address	tariqjo@yahoo.com

Objectives:

At the end of this lecture, the student should be able to:

- Understand the pathology and predisposing factors of ectopic pregnancy and spontaneous abortion.
- Know the clinical presentation and pathology of hydatidiform mole and gestational choriocarcinoma

Title of the lecture: Endometriosis and polycystic ovarian disease.	
Lecturer's name	Dr. Tariq Al Johani
Department	Pathology
Block / week	Reproduction block / 3
Email address	tariqjo@yahoo.com

Objectives:

At the end of this lecture, the student should be able to:

- Know the clinicopathologic features of endometriosis with special emphasis on: definition, typical sites and theories behind its pathogenesis.
- Understand the clinical manifestations and pathologic features of polycystic ovarian disease.

Title of the lecture:	Teratogens and drugs of abuse in pregnancy
Lecturer's name	Dr. Ishfaq Bukhari
Department	Pharmacology
Block / week	Reproduction block / 3
Email address	iabukhari@ksu.edu.sa

Objectives:

At the end of the lecture, students should be able to know and understand the:

- To understand factors affecting drug placental transfer
- To recognize harmful effects of drugs during different stages of development
- To know FDA classifications of drugs.
- To be able to explain the meaning of teratogenic drugs
- To identify adverse effects of drugs
- To know the effects of drug abuse

Title of the lecture:	Tocolytics and Oxcytocin
Lecturer's name	Prof. Al Humayyad
Department	Pharmacology
Block / week	Reproduction block / 3
Email address	humayyd@ksu.edu.sa

Objectives:

At the end of the lecture, students should be able to know and understand the:

- Drugs used to control post partum haemorrhage
- Drugs used to induce pathological abortion
- Drugs used to arrest premature labor
- The mechanism of action and adverse effects of each drug.

Title of the lecture:	Psychological behavioral changes in puberty
Lecturer's name	Dr. Ahmad Alhadi
Department	Psychiatry
Block / week	Reproduction block/ week 3
Email address	alhadi@ksu.edu.sa

Objectives:

At the end of the lecture students should know;

- To recognize the major psychological, emotional, cognitive & social development during adolescence
- To acknowledge the clinical implications of such changes on the mood, behavior & reaction of adolescents.

Title of the lecture:	Anatomy of female breast
Lecturer's name	Prof. Saeed Abuelmakarem
Department	Anatomy
Block / week	Reproduction block/ week 4
Email address	saubelmakarem@ksu.edu.sa; saeedmakarem@hotmail.com

Objectives:

At the end of the lecture students should know;

- Describe the shape and position of the female breast.
- Describe the structure of the mammary gland.
- List the **blood supply** of the female breast.
- Describe the lymphatic drainage of the female breast.
- Describe important applied anatomy of the female breast.

Title of the lecture:	Hormones affecting female breast
Lecturer's name	Dr. Mohammed Alotaibi
Department	Physiology
Block / week	Reproduction block/ 4
Email address	mfalotaibi@ksu.edu.sa

Objectives:

At the end of the lecture, students should be able to know and understand the:

- Know the physiologic anatomy of the breast.
- Describe the physiological changes that occur in the breast during mammogenesis, lactogenesis, and galactopoeisis and the hormones involved.
- Recognize the phases of lactogenesis.
- Describe the endocrine and autocrine control of lactation.
- Explain the physiological basis of suckling reflex and its role in lactation

Title of the lecture: Pathology of benign breast diseases	
Lecturer's name	Dr. Tariq Al Johani
Department	Pathology
Block / week	Reproduction block / 4
Email address	tariqjo@yahoo.com

Objectives:

At the end of this lecture, the student should be able to:

- Know the ways that benign breast conditions can clinically present.
- Know the common inflammatory conditions of breast (mastitis and abscesses).
- Understand the pathology of fibrocystic change.
- Know the common benign breast tumours with special emphasis on fibroadenoma and phyllodes tumour.
- Know the risk of subsequent breast cancer in women with diagnosed benign breast tissue.

Title of the lecture:	Breast cancer
Lecturer's name	Dr. Tariq Al Johani
Department	Pathology
Block / week	Reproduction block / 4
Email address	tariqjo@yahoo.com

Objectives:

At the end of this lecture, the student should be able to:

- Know the risk factors for the development of breast cancer.
- Know the classification of breast cancer.
- Understand the behavior and spread of breast cancer.
- Know the prognostic indicators of breast carcinoma.

Title of the lecture: **Breast cancer + ovarian cysts- Practical**	
Lecturer's name	Dr. Abdullah Basabein / Dr. Tariq Aljohani
Department	Microbiology (Pathology)
Block / week	Reproduction block/ week 4
Email address	a.basabien@gmail.com; absabein@ksu.edu.sa / tariqjo@yahoo.com

Objectives:

At the end of the lecture students should know;

- Know the normal structure of the male and female genital systems.
- Acquire the knowledge about the gross appearances and histopathological features of the following diseases in the Male and Female genital systems and breast.
  - Ovarian cysts and breast masses.
  - Dermoid cysts (Teratoma) of the ovary.
  - Breast diseases (Fibroadenoma, invasive ductal carcinoma and Paget's disease of the nipple)

Title of the lecture:	Genetics of breast + ovarian cancer
Lecturer's name	Prof. Ammar Rikabi
Department	Pathology
Block / week	Reproduction block / 4
Email address	rikabi@ksu.edu.sa

Objectives:

At the end of this lecture, the student should be able to:

- Recognize carcinoma of the female breast as the leading cause of cancer morbidity and mortality among women.
- Know the risk factors of breast cancer with special emphasis on the genetics and importance of family history.
- Know the role of molecular prognostic and predictive factors in breast cancer with special emphasis on hormonal receptors and Her-2neu status.

Title of the lecture: Biomarkers of Ovarian cancer and cysts	
Lecturer's name	Dr. Usman Ghani
Department	Anatomy
Block / week	Reproduction block/ week 4
Email address	ugsearch@hotmail.com

Objectives:

At the end of the lecture students should know;

- Discuss the risk factors and possible causes of polycystic ovarian syndrome (PCOS) and ovarian cancer.
- Comprehend the role of insulin resistance and hypersecretion of androgens in the development of PCOS.
- Identify avenues for the diagnosis and treatment of PCOS and ovarian cancer.
- Assess the diagnostic significance of CA-125 in ovarian cancer.

Keywords:

Polycystic ovarian syndrome, PCOS, luteinizing hormone, follicle stimulating hormone, androgens, testosterone, insulin resistance, obesity, glucose intolerance, CA-125, ovarian cancer, biomarker

Background:

- PCOS is due to presence of cysts in the ovaries that is highly associated with insulin resistance, obesity and hypersecretion of androgens.
- Diagnosis of PCOS involves measuring biomarkers such as LH, SHBG, testosterone, FSH, blood glucose and lipids.
- Ovarian cancer is a common cause of gynecologic death. Risk factors for ovarian cancer include nulliparity, family history and BRCA1 and 2 gene mutations.
- CA-125 is the only biomarker for the diagnosis of ovarian cancer. It is a nonspecific marker useful for staging and follow up of the disease.

Main concepts in the lecture:

Polycystic ovarian syndrome (PCOS) is characterized by appearance of multiple small cysts in the ovaries. It is one of the major causes of infertility that affects about 5-10% of women. There is a strong correlation of the syndrome with obesity, hirsutism, glucose intolerance, insulin resistance, chronic anovulation and menstrual disorders. Women with PCOS tend to exhibit hypersecretion of leutinizing hormone (LH) and androgens (testosterone). Additionally low levels of SHBG (sex hormone-binding globulin) are also associated with the syndrome. The exact etiology of PCOS is yet to be known. However, research suggests that it is multifactorial that involves environmental and genetic factors. One of the most important and apparent causes is insulin resistance that leads to excessive ovarian production of androgens. Other possible causes include abnormalities in ovaries, adrenal and pituitary glands. The biomarkers for the diagnosis of PCOS include free testosterone (high), SHBG (low), LH (high) and FSH (usually normal). Diagnosis also includes measuring fasting blood glucose, insulin and lipids. Treatment of PCOS involves reducing body weight and LH levels, and increasing FSH levels therapeutically.

Ovarian cancer, a leading and most common cause of death due to gynecologic cancer, is because of malignant transformation of ovarian epithelial cells. It subtypes consists of serous (surface epithelial tumors), mucinous epithelial tumors and endometrial tumors. Risk factors such as nulliparity (woman with no child birth or pregnancy), family history of breast, ovarian, colorectal cancer, mutations in BRCA1 and BRCA2 genes (most common) are strongly correlated to ovarian cancer. Plasma CA-125 is the only biomarker for the diagnosis of ovarian cancer. It is a cell surface glycoprotein expressed in the epithelium of all tissues. CA-125 is elevated in ovarian cancer and plasma levels of >35 U/ml is considered positive. Diagnosis is also complemented by history taking, physical examination and ultrasound. Ovarian cancer is usually diagnosed at a later stage due to its nonspecific symptoms. CA-125 is a nonspecific marker because it is elevated in benign conditions. It cannot be used for screening of ovarian cancer. Nevertheless, it is a useful marker for determining the stage of the disease, and for monitoring the treatment. It is also recommended as an annual test for women with associated risk factors.

Conclusion:

- Insulin resistance and endocrine abnormalities play important roles in the etiology of PCOS.
- Nulliparity, family history and BRCA gene mutations are major risk factors for ovarian cancer.

- CA-125 is the only biomarker for the diagnosis of ovarian cancer. It is useful for staging and treatment follow up of the disease

Take home messages:

- PCOS is strongly correlated to insulin resistance and endocrine abnormalities.
- Although a nonspecific biomarker, CA-125 is important for staging and follow-up of ovarian cancer.

Further reading:

- Sheehan, MT. Polycystic ovarian syndrome: diagnosis and management. *Clin. Med. Res*., 2003, 2(1): 13-27
- Sundar, S. Diagnosis of ovarian cancer. *BMJ*, 2015, 351:h4443.

Title of the lecture: Hormonal replacement therapy	
Lecturer's name	Dr. Ishfaq Bukhari
Department	Pharmacology
Block / week	Reproduction block / 4
Email address	iabukhari@ksu.edu.sa

Objectives:

- To recognize menopausal symptoms & consequences
- To classify drugs used as Hormonal Replacement Therapy [HRT]
- To expand on the mechanism of action, indications, preparations, side effects and contraindications of these agents.

Keywords:

(Menopause, Hormonal replacement therapy, Estrogen, Progestins, SERMs; Tamoxifen, Raloxifene, Phytoestrogens, Tibolone)

Background:

- Prior knowledge about menopause, definition, causes, symptoms.
- Prior knowledge about normal menstrual cycle, hormonal changes.

Main concepts in the lecture:

- Brief introduction about normal menopausal cycle, hormonal changes.
- Symptoms of menopause.
- Consequences of menopause; immediate, intermediate and long term.
- Classification of drugs used for treatment of menopause. Detailed information about selected drugs; mechanism of action, pharmacokinetics, clinical uses, advantages and disadvantages of estrogens, progestins, SERMs, tibolone, phytoestrogens)
- HRT; benefits and risks

Conclusions:

HRT is used to relieve symptoms of the menopause as it replaces hormones which are at a lowest level at the menopause. HRT relieves most of the menopausal symptoms, such as hot flushes night sweats, mood swings, vaginal dryness, reduced sex drive. Major concern about the use of HRT; cancer and stroke

Take home messages:

- HRT is widely used for treatment of menopausal symptoms.
- Benefits of HRT are widely recognized (reduces hot flashes, vaginal dryness, night sweats, and bone loss) but its unwanted side effects are the cause of much controversy (irregular bleeding, increased risk of cancer and stroke).
- A low dose of estrogen can be used for women with hysterectomy.
- Combined therapy (estrogen + progestin) is preferred in women with uterus.
- SERMs (tamoxifen is agonist at bone and uterus, antagonist at breast while raloxifene is agonist at bone; antagonist at breast and uterus)

Further reading:

- Basic and Clinical Pharmacology, Bertram Katzung ,Anthony Trevor
- -Lippincott Illustrated Reviews: Pharmacology

Title of the lecture:	Drugs affecting breast and milk lactation
Lecturer's name	Dr. Saeed Sheikh
Department	Pharmacology
Block / week	Reproduction block / 4
Email address	saeedahmedshk@yahoo.com; sheikhsa63@gmail.com

Objectives:

At the end of the lecture, students should be able to know and understand the:

- Recognize the main pharmacological characters that control the passage of drugs from milk to baby.
- Identify the adverse effects of major pharmacological categories on babies.
- Describe the best and safest medication to be given to breast feeding women if she is suffered from different diseases as epilepsy, infection, diabetes, heart failure, and hypertension.
- Know drugs that can inhibit lactation and should be avoided in breast feeding
- Know drugs that may enhance lactation.

Title of the lecture:	**Breastfeeding**
Lecturer's name	Dr. Hussien Saad
Department	Family and Community Medicine
Block / week	Reproduction block/ week 4
Email address	hsmamin@gmail.com; husseinnamin52@yahoo.com

Objectives:

At the end of the lecture students should know;

- To increase awareness about the benefits of breastfeeding.
- To know about the properties of breastfeeding.
- To educate about the basics of breastfeeding and empower parents to make an informed choice.
- To educate about the harms associated with formula feeding.
- To know about the contraindication of breastfeeding

Title of the lecture:	**Pre marital counselling tests**
Lecturer's name	Dr. Syed Irfan karim
Department	Family and Community Medicine
Block / week	Reproduction block/ week 4
Email address	skarim@ksu.edu.sa rfankarim1969@gmail.com

Objectives:

At the end of the lecture students should know;

- What is premarital counseling.
- Who are Carrier's and their fates.
- How to interpret the TESTS.
- What is a successful counseling.

Background:

Premarital counseling is a type of advice that helps couples prepare for marriage. Premarital counseling can help ensure that both spouses would have a strong, healthy relationship — giving them a better chance for a stable and satisfying marriage.

Main concepts in the lecture:

- 25-60% of all marriages in Arab regions are consanguineous , with a high incidence of first-cousin marriage.
- In Saudi Arabia , 90% of couples detected as carriers did not follow the advice and went ahead with their marriages.
- There are many teachings in Islamic Culture which promote healthy marriage and role of counseling.
- Encourage individual or family to obtain information about a genetic condition that may effect them , so that they can make appropriate decisions about marriage , reproduction and health management.

Conclusion

- Education and attitude of the couples to be screened .
- The meaning of the term "carrier Status" should be made known to the members of the public long before they get married.
- Educational programs about the benefits of premarital examination should target unmarried males , so they can make informed choices about unmarried females and consanguineous marriages.

- Active involvement of policy makers to establish and implement appropriate screening techniques and policies.

Take-home messages:

- Any mandatory screening program does have the potential to succeed as long as the TARGET POPULATION is clearly identified and all ethical issues (confidentiality of results) ,religious , cultural and human rights and concerns about post-diagnostic management are fully addressed.

Title of the lecture: Candida infection + trichimonas vaginalis, bacterial vaginosis	
Lecturer's name	Dr. Ibrahim Al Khalife
Department	Microbiology (Pathology)
Block / week	Reproduction block/ week 5
Email address	alkhalifei@hotmail.com; ialkhalife@ksu.edu.sa

Objectives:

At the end of the lecture students should know;

- know the terms : vulvitis, vaginitis and vulvovaginitis
- describe the characteristics of the vagina and cervix in Women
- Compare prevalence of 3 primary infections: Bacterial vaginosis, candidiasis and Trichomoniasis
- know clinical features and diagnosis of Bacterial vaginosis
- know clinical features and diagnosis of vaginal yeast
- know clinical features and diagnosis of Trichomoniasis

Keywords:

- vaginitis, …vulvitis….., …vulvovaginitis…., …normal flora…, …bacterial……..., candida
- Trichomonas, …itching.., …vaginal discharge., …Whiff amine test., …gram stain.., Pap smear

Title of the lecture:	CHLAMYDIA ,GONORRHEA & SYPHILIS
Lecturer's names	Dr. Abdulaziz Al Khattaf
Department	Pathology
Block / week	Reproduction Block / week 5
Email address	alkhattaf2@hotmail.com / hahabib@ksu.edu.sa

Objectives of the lecturer:

- Know the causative agents of Syphilis, Gonorrhea and Chlamydia infections.
- Realize that these three infections are acquired through sexual intercourse.
- Know the pathogenesis of syphilis, gonorrhea and Chlamydia infection.
- Describe the clinical feature of the primary, secondary tertiary syphilis and the following complications.
- Recall the different diagnostic methods for the different stages of syphilis.
- Describe the clinical feature of gonorrhea that affect only men, only women and those which affect both sexes.
- Describe the different laboratory tests for the diagnosis of gonorrhea including microscopy of the discharge and culture of the organism on selective media.
- Describe the morphology and the distinct life cycle of the Chlamydia.
- Realize what are the different genera, species and serotypes of the family Chlamydiacea .
- Recognize that Chlamydia cause different disease that affect, the eye (causing trachoma) the respiratory system (mainly cause a typical pneumonia).
- Know the different urogenital clinical syndromes caused by *Chlamydia trachomatis* that affect men, women and both sexes.
- Realize that these urogenital syndromes are different to differentiate clinically from the similar ones caused by *N.gonorrhoea* eg: gonococcal urethritis.
- Know the different treatment of syphilis, gonorrhea and Chlamydia infections.
- Realize that there are no effective vaccines against all these three diseases.

Background:

- Syphilis, gonorrhea and Chlamydia infections are mainly sexually transmitted diseases. All are caused by delicate organisms, which cannot survive outside the body. So they need direct mucous membrane to mucous membrane inoculation.
- Syphilis is caused by a Spirocheatal organism called *Treponema Pallidum* which so far has not been cultured on artificial media. The disease has an incubated period of 2-6 weeks. It presents in different 4 stages.
- Gonorrhea is caused by a gram negative coccus which is always oxidize positive and intracellular and called *Neisseria gonorrhea*. It presents mainly as an acute mucopurulent urethral discharge with an incubation period of 2-5days.
- Chlamydia infections affect the urogenital system, respiratory system (atypical pneumonia) and the world wide eye disease called trachoma. Only the urogenital syndromes will be covered in this lecture. The infections are caused by *Chlamydia* species with different serotypes. *Chlamydia trachomatis* is the one which causes

urogenital serotypes (D-K). *Chlamydia* are obligate intra cellular agents which grow only in live tissues.

Main concepts in the lecture:

- Syphilis
- Definition: A chronic systemic infection caused by T*reponema pallidum*; usually sexually transmitted ,it only affect humans, starts after 2-6 weeks incubation by a primary phase lesion (chance) followed by a secondary phase leading to latent and tertiary phases.
- Etiology: *T. pallidum* is unstainable by normal stains and unculturable on artificial media.
- Pathogenesis: The disease infect only humans and casually transmitted by penetrating the mucous membrane it can be transmitted congenitally (transplancentaly) and rarely by blood transfusion. The primary lesion persists for 4-6 weeks (the chancre) which appears mainly in the male and female genitalia later it proceed to the secondary stage and later the latest stage which the organisms are dormant in pathological lesions called Gumma the latent lesion proceed to tertiary stage affecting certain organs.
- Clinical features:
- Primary syphilis: Start as a papule on the genitalia, penis, anal canal, cervix, labia, and the mouth. The lesion is indurated and painless it is very infectious it stays for 4-6 weeks with inguinal lymph node enlargement.
- Secondary syphilis: It is a systemic stage with bacteremia, characterized by generalized skin rash, fever, generalized non tender lymphadenopathy and diffuse maculopapular lesions that can affect the mouth (snail track ulcers). The general clinical feature accompanying fever also appear like, malaise, head ache, weight loss etc.
- Latent syphilis: Divided into early latent less than one year and late latent more than one year. In both organisms are dormant. The pathology is mainly endarteritis.
- Tertiary syphilis (late syphilis): It affects most organs the most important of these organs are the central nervous system (CNS): The manifestations of syphilis starting asymptomatically only diagnosed by positive serological tests.
- Symptomatic neurosyphilis: It could be early .
- Meningeal that affects the meninges.
- Meningovascular that affect the meninges and blood vessels
- Parenchymal that affect brain substance.
- The late effects on the CNS are:
- *General Parasis* of the *insane* (G.P.I) which affects the parenchyma of the brain, the patient presents with paresis and change of personality i.e. losing memory, due to the effect on the frontal lobe.
- Tabes dorsalis: affects the posterior columns of the spinal card and dorsal roots which may lead to a typical gate, ataxia, incontinence, etc.
- Congenital syphilis: Due to transplacental infection of the fetus which can lead to still birth, abnormalities, but can also resemble secondary or late syphilis features.
- Lab diagnosis: the bacteria cannot be stained or cultured on artificial media.

- Primary syphilis can be diagnosed microscopically by dark field illumination or silver impregnation.
- Diagnosis is mainly by serological tests i.e. looking for antibodies against the infecting organism.
- Non specific tests use cardiolipin antigen e.g. VDRL
- Specific test using treponemal antigens these tests are- FTA- ABS- or TPHA
- Interpretation of the test:
    - VDRL and RPR are positive in primary syphilis and disappear after 2 years and the titer goes down with treatment.
- Specific test:
    - (FTA -ABS and TPHA) are positive through all the stages.

- Treatment:
    - Penicillin is the drug of choice.
    - In allergic patient to penicillin use erythromycin or tetracycline.

- <u>Gonorrhea:</u>

- Definition:
- A sexually transmitted disease (S.T.I) of epithelium commonly presenting as urethritis, cervicitis, proctitis and conjunctivitis-untreated infection of those sites can lead to local complications as endometritis, salpingitis, tubuovaritis abscess, peritonitis and perihepatitis. It can also disseminate to cause bacteriaemia, endocarditis, meningitis and reactive arthritis.
- Etiology:
    - Gram negative diplococci which are usually intra cellular and are oxidize positive and ferments glucose (remember Gonorrhea Glucose)
- Pathogenesis:
    - Strains having pilli which attachés to epithelium and initiate inflammation characterized by acute inflammation with profuse production of pus cells.
- Clinical manifestation:
- In males:
- Acute urethritis: Is in the most common presentation
- Acute profuse urethral discharge
- With an incubation period of 2-5 days
- Severe burning micturition (pain during passing urine)
- Increase in frequency
- Gonorrhea in women:
- Mucopurulent Cervicitis is the most common presentation
- Urethritis with discharge
- In both sexes (male and female)
- Urethritis
- Proctitis
- Pharyngitis

- Complications in males: include epididymitis & orchitis
- In females: endometritis fallopian tube infection (salpingitis) In both sex: systemic infection can include bacteremia, endocarditis perihepatitis meningitis and most common reactive arthritis.

- Diagnosis:
- Demonstration of intra cellular gram negative diplococci in urethral discharge in males and cervical discharge in female.
- Culture on selective media like:
- Thayer-Martin or New York city medium
- Treatment : depends susceptibility testing. Empiric therapy by ceftriaxone. If Chlamydia infection is suspected usually use Azithromycin.

- <u>CHLAMYDIA INFECTIONS</u>
- Definition:
    - Infections caused by the genus *Chlamydia* which are obligate (strict) intracellular bacteria.
- Etiology:
    - *Chlamydia* are obligate intracellular bacteria that cannot produce their own energy so they depend on the host for supply of energy for growth and replication. Different species and different serotypes are found
- These are: *Chlamydia trachomatis* which has the following serotypes.
- A B C- That cause trachoma, a human disease which is the commonest cause of blindness in the world.
- D K - Which cause genital infection and inclusion conjunctivitis in humans
- L_1 L_2 L_3- Which cause lymphagranuloma venerium in humans
- *Chlamydia pneumonia*: causes respiratory infection in humans
- *Chlamydia psittaci*: causes disease in Parrots and can infect human causing ornithosis or psittacosis.
- Pathogenesis
- The majority of infections are caused by *C.tracchomatis* which causes sexually transmitted disease. It is an intracellular organism. it infect the columnar epithelium of the eye and genital tract, the infection persists for long periods the organism lives intracellular and has a characteristic life cycle characterized by element bodies which are the infectious particles and reticulate bodies which are metabolically active and not infectious .

- Clinical manifestation:
- It causes the following:
- Non gonococcal urethritis (NGU)and postgonococcal urithritis, these are the commonest sexually transmitted disease encountered in developed countries. It usually accompany gonococcal urethritis. It presents with dysuria and discharge, less than the discharge of gonococcal urethritis with no gram negative cocci organism seen.
- In men: this can proceed to epididymitis
- In women: can proceed to salpingits, urethral syndrome and endometritis
- In women it can also proceed to mucopurulent cervicitis and pelvic inflammatory disease (PID)
- In both sex it can cause Proctitis
- In new born can inclusion conjunctivitis
- Serotypes, L1 L2 L3 of *Chlamydia trachomatis* cause lymphgranulama veneri um which is characterized by a papule and inguinal lymphadenopathy.
- Diagnosis:
    - By microscopy of the discharge to look for inclusion bodies stained by iodine or Giemsa stains.
- Culture:
    - Cannot grow on artificial medicine but can grow an McCoy cell lines which can then be stained by iodine or Geimsa.
- P C R : Can be used as well
- Treatment: Macrolides e.g.; azithromycin, erythromycin or doxycycline

Conclusion:

- Syphilis ,gonorrhea and chlamydia are sexually transmitted diseases . these infections can spread and present systemically leading to serious complications . Syphilis and chlamydia are not cultured in artificial media . Diagnosis of syphilis is by serology and chlamydia diagnosed by culture on cell line and stained by Giemsa or iodine or by PCR .Gonorrehea can be stained by gram stain and cultured on selective media. Treatment is by the use appropriate antibiotics to cover all organisms. Counselling and investigation for HIV and Hepatitis B &C is recommended for all cases.

Take home messages:

- Syphilis, gonorrhea and Chlamydia infection are mainly sexually transmitted disease .Syphilis is caused by *Treponema. Pallidum* which is unstainable by simple stains and also non culturable. *Chlamydia trachomatis* the cause of Chlamydia genital and eye infectious is nonculturable on artificial media. But *N.gonorrhoea* is stainable by gram stain and culturable on selective media
- Although these infection are sexually transmitted they are not localized to the genital organs as they can spread in both sex to pelvic organs and systemically
- Syphilis has 3 different stages:

- Primary chance on genitalia which is the most infectious, secondary stage with more profound clinical features, latent which develop in late stage affecting the cardiovascular and central nerves in which the pathology is mainly endarteritis
- Diagnosis of gonorrhea is by microscopy of discharge by presence of pus cells and gram negative intra cellular cocci and cultured on selective media .
- Diagnosis of syphilis is by microscopy primarily dark field or silver impregnate
- Serology- secondary latent are :
- Non specific antigen
- b) Specific antigens
- All cases of sexually transmitted diseases should be investigated for HIV, Hepatitis B& C.
- Treatment (specific)
- Syphilis-Penicillin
  - Gonorrhea- Ceftriaxone
- Chlamydia –Azithromycin
- Azithromycin can cover all three infections

Further reading:

Sherries Medical Microbiology, an Introduction to Infectious Diseases. Latest edition, Kenneth Ryan and George Ray. Publisher : McGraw Hill .

Title of the lecture: Transplacental infection	
Lecturer's name	Dr. Abdulaziz Al Khattaf
Department	Microbiology (Pathology)
Block / week	Reproduction block/ week 5
Email address	alkhattaf2@gmail.com

Objectives:

At the end of the lecture students should know;

- recognize the different types of infant infections.
- know major transplacentaly transmitted pathogens causing congenital infections .
- (Toxoplasma , TP ,ParvoV , VZV, Rubella V & CMV.)
- describe their structures.
- know their major epidemiology features.
- describe clinical manifestations of their congenital infections.
- illustrate different laboratory diagnosis of maternal and congenital infections
- know their treatment and preventive measures.

Title of the lecture:	AIDS
Lecturer's name	Dr. Abdulkarim Al Heetel
Department	Microbiology (Pathology)
Block / week	Reproduction block/ week 5
Email address	aalhetheel@ksu.edu.sa

Objectives:

At the end of the lecture students should know;

- Describe the main characteristics of HIV.
- Describe the epidemiology and the mode of transmission of HIV.
- Distinguish the stages of HIV infection.
- Describe the clinical manifestations of each stage of HIV infection.
- Describe the biomarkers in each stage of HIV infection.
- Describe the laboratory methods used to diagnose HIV infection.
- Describe the treatments and the prevention measures available for HIV.

Title of the lecture:	Herpes simplex and genital warts
Lecturer's name	Dr. Abdulkarim Al Heetel
Department	Microbiology (Pathology)
Block / week	Reproduction block/ week 5
Email address	aalhetheel@ksu.edu.sa

Objectives:

At the end of the lecture students should know;

- Distinguish the clinical manifestations of genital herpes from genital warts.
- Distinguish the viral etiology of genital herpes and genital warts.
- Describe the essential characteristics of HSV-1 and HPV.
- Describe the epidemiology and the mode of transmission of these viruses.
- Describe the laboratory methods used to diagnose these viral infections.
- Describe the treatments and the prevention measures available for these viral infections.

Title of the lecture: **Sexually Transmitted Diseases (Practical)**	
Lecturer's name	Prof. Ali Somily
Department	Microbiology (Pathology)
Block / week	Reproduction block/ week 5
Email address	Ali.somily@gmail.com

Objectives:

At the end of the lecture students should know;

- Name various etiological agents causing localized STD.
- (Genital ulcers, Urethritis and Urethral vaginal discharge)
- Describe the clinical presentations of localized STD.
- Discuss the microbiological methods used for Dx of localized STD.
- Outline the management of localized STD

Title of the lecture: Systemic manifestations of Aids	
Lecturer's name	Prof. Ammar Al Rikabi
Department	Pathology
Block / week	Reproduction block / 5
Email address	rikabi@ksu.edu.sa

Objectives:

At the end of this lecture, the student should be able to:

- Understand the pathogenesis of the Aids syndrome.
- Recognize the systemic manifestations of the Aids syndrome with special emphasis on Kaposi sarcoma and principal opportunistic infections that could be encountered in Aids patients.

Title of the lecture: AIDS	
Lecturer's name	Dr. Zahid Shakoor
Department	Immunology (Pathology)
Block / week	Reproduction block/ week 5
Email address	zshakoor@ksu.edu.sa ; Shakoor_zahid@yahoo.com

Objectives:

At the end of the lecture students should know;

- To know the modes of transmission of HIV
- To understand HIV interactions with CD4 positive helper lymphocytes
- To understand the mechanisms involved in immunodeficiency associated with HIV
- To know the course of immunological events from the time of infection with HIV until the development of AIDS

Title of the lecture:	Drugs used in treatment of gonorrhoea and syphilis
Lecturer's name	Prof. Al Humayyd
Department	Pharmacology
Block / week	Reproduction block / 5
Email address	humayyd@yahoo.com

Objectives:

At the end of the lecture, students should be able to know and understand the:

- List the drugs used in the treatment of syphilis & gonorrhea.
- Describe the mechanism of action and adverse effects of each drug.
- Describe the contraindications of drugs used
- Describe the recommended regimens used for the treatment of syphilis & gonorrhea
- Know the alternative treatments in allergic patients.

The College of Medicine and the Department of Medical Education are working on ensuring that our students receive optimal support to their learning. The list of academics shown below represents the departments involved in the teaching and learning of this block. If a student needs help in their teaching and learning they might consult one academic from the list. She might email them and arrange a time to see them if needed, otherwise email might be of help.

ACADEMIC SUPPORT TEAM			
Names	**Department**	**Contact numbers**	**Email Addresses**
Prof. Samy Azer	Medical Education	0542307075	sazer@ksu.edu.sa
Prof. Malak Alhakeem	Obstetrics and Gynecology	0504422066	alhakeem.malak@yahoo.com
Prof. Seed Abumakarem	Anatomy	0556439341	saeedmakarem@hotmail.com
Dr. Sumbul Fatma	Biochemistry	0598245851	sumbulfatma@gmail.com
Dr. Mohammed Al Otaibi	Physiology	0504225889	mfalotaibi@ksu.edu.sa
Dr. Mona Badr	Microbiology	0504475834	monabadr@ksu.edu.sa
Dr. Tariq Al Johani	Pathology	0505473108	tariqjo@yahoo.com
Prof. Zahid Shakoor	Immunology	0535067623	Shakoor_zahid@yahoo.com zshakoor@ksu.edu.sa
Prof. Mohammad Alhumayyd	Pharmacology	0505475978	humayyd@yahoo.com

Schedule – Male Group A

WEEK 1 –REPRODUCTION BLOCK (Male-A)				
Week (1) 11/03/2018 to 15/03/2018				
FEMALE REPRODUCTIVE SYSTEM & DEVELOPMENT				
CHAIR PERSON : Prof. Malak Al Hakeem				
CO-CHAIR: Prof. Saeed Abdulmakarem				
Sunday 11 March 2018	**Monday 12 March 2018**	**Tuesday 13 March 2018**	**Wednesday 14 March 2018**	**Thursday 15 March 2018**
8:00 - 9:00 am Female perineum and external genitalia **(Anatomy)** **Dr. Mohammed Vohra**	**8:00 - 10:00am** Small Group Learning(PBL) **Case 1 Part 1**	**8:00 - 9:00 am** **Clinical Skills** Bimanual Vaginal (PV) Examination and taking a Pap Smear A1	**8:00 - 10:00am** **Practical** Pathology of female reproductive organ **(Pathology)** **Dr. Abdullah Basabien/ Dr. Tariq Aljohani**	**8:00 - 10:00am** Small Group Learning(PBL) **Case 1 Part 2**
9:00 - 10:00 am **Introductory Lecture** **Prof. Saeed Abuelmakarem Block Co-Chair)**		**9:00– 10:00am** **Clinical Skills** Bimanual Vaginal (PV) Examination and taking a Pap Smear A2		
10:00 -11:00am Female reproductive system **(Anatomy)** **Prof. Ahmed Fathalla**	**10:00 -11:00am** Physiology of ovarian cycle **(Physiology)** **Dr. Mohammed Al Otaibi**	**10:00 - 11:00am** Endometrial hyperplasia, uterine cancer and fibroids **(Pathology)** **Dr. Tariq Aljohani**	**10:00- 11:00 am** Congenital adrenal hyperplasia syndrome and testicular feminization syndrome **(Biochemistry)** **Dr. Ahmed Mujammami**	**10:00- 11:00pm** Ovarian cysts and ovarian tumours **(Pathology)** **Dr. Tariq Aljohani**
11:00 -12:00pm Development of the female reproductive system **(Anatomy)** **Dr. Essam Salam**	**11:00 -12:00pm** Physiology of uterine cycle **(Physiology)** **Dr. Mohammed Al Otaibi**	**11:00 - 12:00pm** Anatomy of the female pelvis **(Anatomy)** **Prof. Saeed Abuelmakarem**	**11:00-12:00 pm** Kleinfelter and Turner syndrome + Down's Syndrome **(Genetics)** **Dr. Faisal Al Owaidi**	**11:00 - 12:00pm** **Practical** Histology of female reproductive system **(Histology)** **Prof. Saeed Abuelmakarem**
Lunch 12:00- 1:00 pm	**Lunch 12:00- 1:00 pm**	**Lunch 12:00- 1:00 pm**	**Lunch 12:00- 1:00 pm**	**Lunch 12:00- 1:00 pm**
1:00 - 2:00 pm Hypothalamic and pituitary gonadal axis **(Physiology)** **Dr. Khalid AlRegaiey**	**1:00 -2:00pm** Histology of female reproductive system **(Anatomy)** **Dr. Aly Mohamed**	**1:00 - 3:00 pm** **Salam**	**1:00 -3:00pm** **Practical** Anatomy of the female pelvis and reproductive organs **(Anatomy)** **Prof. Saeed Abuelmakarem** **All Staff**	**1:00 - 2:00 pm** **Being and effective team player** **(Patient Safety)** **Dr. Ahmed Aboshaiqah**
2:00-3:00pm **Self -Directed Learning**	**2:00 -3:00pm** **Self -Directed Learning**			**2:00-3:00 pm** **Engaging with patient cares** **(Patient Safety)** **Dr. Ahmed Aboshaiqah**

WEEK 2 – REPRODUCTION BLOCK (Male-A)

Week (2) 18/03/2018 to 22/03/2018

MALE REPRODUCTIVE SYSTEM & DEVELOPMENT & INFERTILITY

CHAIR PERSON : Prof. Malak Al Hakeem

CO-CHAIR: Prof. Saeed Abdulmakarem

Sunday 18 March 2018	Monday 19 March 2018	Tuesday 20 March 2018	Wednesday 21 March 2018	Thursday 22 March 2018
8:00 - 9:00 am **Self -Directed Learning**	**8:00 -10:00 am** Small Group Learning(PBL) **Case 2 Part 1**	**8:00 - 9:00 am** **Clinical Skills** Examine the external genitalia of male A1	**8:00 - 9:00 am** Investigation of infertile couple **(Biochemistry)** **Dr. Usman Ghani**	**8:00 - 10:00 am** Small Group Learning(PBL) **Case 2 Part 2**
9:00 - 10:00 am **Self -Directed Learning**		**9:00– 10:00am** **Clinical Skills** Examine the external genitalia of male A2	**9:00-10:00 am** Drugs used in infertility **(Pharmacology)** **Prof. Al Humayyd**	
10:00 - 11:00am Histology of the male reproductive system **(Histology)** **Dr. Aly Mohamed**	**10:00 -11:00am** Development of the male reproductive organs **(Anatomy)** **Prof. Ahmed Fathalla**	**10:00 - 11:00am** Prostatic hyperplasia and cancer prostate **(Pathology)** **Dr. Tariq Aljohani**	**10:00 - 12:00pm** **Practical** Histology of male reproductive organs **(Histology)** **Prof. Saeed Abuelmakarem** **All Staff**	**10:00 - 12:00am** **Practical** Pathology of male reproductive organs **(Pathology)** **Dr. Abdullah Basabien/Dr. Tariq Aljohani**
11:00- 12:00 pm Anatomy of the male reproductive system **(Anatomy)** **Prof. Saeed Abuelmakarem**	**11:00 - 12:00pm** Diseases of the epididymis and testicular tumours **(Pathology)** **Dr. Tariq Aljohani**	**11:00 - 12:00pm** Physiology of androgens and control of male sexual functions **(Physiology)** **Dr. Khalid AlRegaiey**		
Lunch 12:00- 1:00 pm	**Lunch 12:00- 1:00 pm**	**Lunch 12:00- 1:00 pm**	**Lunch 12:00- 1:00 pm**	**Lunch 12:00- 1:00 pm**
1:00 - 3:00 pm **Practical** Male reproductive organs **(Anatomy)** **Prof. Saeed Abuelmakarem** **All Staff**	**1:00 -2:00pm** **Self -Directed Learning**	**1:00 - 3:00 pm** **Salam**	**1:00 - 2:00pm** Medications affecting erectile dysfunction **(Pharmacology)** **Dr. Ishfaq Bukhari**	**1:00 -3:00pm** **Learning from errors to prevent harm** **(Patient Safety)** **Dr. Ahmed Aboshaiqah**
	2:00 - 3:00pm **Self -Directed Learning**		**2:00 - 3:00pm** Puberty in males and females **(Physiology)** **Dr. Mohammed Al Otaibi**	

WEEK 3 – REPRODUCTION BLOCK (Male-A)

Week (3) 25/03/2018 to 29/03/2018

PREGNANCY & LABOUR

CHAIR PERSON : Prof. Malak Al Hakeem

CO-CHAIR: Prof. Saeed Abdulmakarem

Sunday 25 March 2018	Monday 26 March 2018	Tuesday 27 March 2018	Wednesday 28 March 2018	Thursday 29 March 2018
8:00 - 9:00am **Self -Directed Learning**	**8:00 - 9:00am** Physiology of pregnancy **(Physiology)** **Dr. Mohammed Al Otaibi**	**8:00 - 9:00 am** **Clinical Skills** To take an ideal history related to obstetrics symptoms A1	**8:00 - 9:00am** **Self-Directed Learning**	**8:00 - 9:00am** **Self-Directed Learning**
9:00 - 10:00am Psychological behavioral changes in puberty **(Psychiatry)** **Dr. Ahmad Alhadi**	**9:00 - 10:00am** Tocolytics and oxytocin **(Pharmacology)** **Prof. Al Humayyd**	**9:00 – 10:00 am** **Clinical Skills** To take an ideal history related to obstetrics symptoms A2	**9:00 – 10:00 am** Pathology of trophoblastic diseases **(Pathology)** **Dr. Tariq Aljohani**	**9:00 – 10:00 am** **Self-Directed Learning**
10:00 - 11:00am Placenta **(Anatomy)** **Dr. Mohammed Vohra**	**10:00 - 11:00am** Physiology of labor **(Physiology)** **Dr. Mohammed Al Otaibi**	**10:00 - 11:00am** Drugs inducing ovulation **(Pharmacology)** **Prof. Al Humayyd**	**10:00 - 11:00am** Fetal circulations **(Anatomy)** **Prof. Saeed Abuelmakarem**	**10:00 - 11:00am** **Self-Directed Learning**
11:00- 12:00pm Teratogens and drugs of abuse in pregnancy **(Pharmacology)** **Dr. Ishfaq Bukhari**	**11:00- 12:00pm** Oral and other forms of contraception **(Pharmacology)** **Prof. Al Humayyd**	**11:00- 12:00pm** Pathology of cervix **(Pathology)** **Dr. Tariq Aljohani**	**11:00- 12:00pm** Fertilization and Implantation **(Anatomy)** **Prof. Saeed Abuelmakarem**	**11:00- 12:00pm** Endometriosis and polycystic ovarian disease **(Pathology)** **Dr. Tariq Aljohani**
Lunch **12:00- 1:00 pm**	**Lunch** **12:00- 1:00 pm**	**Lunch** **12:00- 1:00 pm**	**Lunch** **12:00- 1:00 pm**	**Lunch** **12:00- 1:00 pm**
1:00 -2:00pm **Self -Directed Learning**	**1:00 -2:00pm** **Self -Directed Learning**	**1:00 - 3:00 pm** **Salam**	**1:00 - 2:00 pm** **Self -Directed Learning**	**1:00 -3:00pm** **Infection prevention and control** **(Patient Safety)** **Hospital Infection Control Team**
2:00 -3:00pm **Self- Directed Learning**	**2:00 -3:00pm** **Self- Directed Learning**		**2:00-3:00 pm** **Self -Directed Learning**	

WEEK 4 – REPRODUCTION BLOCK (Male-A)

Week (4) 01/04/2018 to 05/04/2018

BREAST

CHAIR PERSON : Prof. Malak Al Hakeem

CO-CHAIR: Prof. Saeed Abdulmakarem

Sunday 01 April 2018	Monday 02 April 2018	Tuesday 03 April 2018	Wednesday 04 April 2018	Thursday 05 April 2018
8:00 – 10:00 am **MIDTERM EXAMINATION**	**8:00 -10:00 am** Small Group Learning(PBL) **Case 3 Part 1**	**8:00 - 9:00am** **Clinical Skills** Examine the breast A1	**8:00 - 9:00am** **Self- Directed Learning**	**8:00 - 10:00 am** Small Group Learning(PBL) **Case 3 Part 2**
		9:00 - 10:00 am **Clinical Skills** Examine the breast A2	**9:00 - 10:00 am** Biomarkers of ovarian cancer and cysts **(Biochemistry)** **Dr. Usman Ghani**	
10:00 - 11:00am Hormonal replacement therapy **(Pharmacology)** **Dr. Ishfaq Bukhari**	**10:00- 11:00 am** Breastfeeding **(Family Medicine)** **Dr Hussein Saad**	**10:00 - 11:00am** **Self -Directed Learning**	**10:00- 11:00 am** Premarital counseling and tests **(Family Medicine)** **Dr Sayed Irfan**	**10:00 - 11:00pm** **Self- Directed Learning**
11:00- 12:00pm Hormones affecting female breast **(Physiology)** **Dr. Mohamed Al Otaibi**	**11:00- 12:00pm** Genetics of breast + ovarian cancer **(Genetics)** **Prof. Ammar Al Rikabi**	**11:00 -12:00 pm** **Self -Directed Learning**	**11:00- 12:00pm** Drugs affecting breast milk and lactation **(Pharmacology)** **Dr. Saeed Sheikh**	**11:00- 12:00pm** Breast cancer **(Pathology)** **Dr. Tariq Aljohani**
Lunch **12:00- 1:00 pm**	**Lunch** **12:00- 1:00 pm**	**Lunch** **12:00- 1:00 pm**	**Lunch** **12:00- 1:00 pm**	**Lunch** **12:00- 1:00 pm**
1:00 - 2:00pm Anatomy of female breast **(Anatomy)** **Prof. Saeed Abuelmakarem**	**1:00 -2:00pm** Pathology of benign breast diseases **(Pathology)** **Dr. Tariq Aljohani**	**1:00 - 3:00 pm** **Salam**	**1:00 - 3:00 pm** **Practical** Breast cancer + ovarian cysts **(Pathology)** **Dr. Abdullah Basabien/ Dr. Tariq Aljohani**	**1:00 -3:00pm** **Patient safety and invasive procedures** **Patient Safety** **Dr. Yasser Sabr**
2:00 -3:00pm **Self -Directed Learning**	**2:00 -3:00pm** **Self- Directed Learning**			

WEEK 5 – REPRODUCTION BLOCK (Male-A)

Week (5) 08/04/2018 to 12/04/2018

SEXUALLY TRANSMITTED DISEASES

CHAIR PERSON : Prof. Malak Al Hakeem

CO-CHAIR: Prof. Saeed Abdulmakarem

Sunday 08 April 2018	Monday 09 April 2018	Tuesday 10 April 2018	Wednesday 11 April 2018	Thursday 12 April 2018
8:00-9:00am **Self-Directed Learning**	**8:00 - 10:00am** Small Group Learning(PBL) **Case 4 Part 1**	**8:00 - 12:00nn** **OSCE**	**8:00 - 9:00 am** Drugs used in treatment of gonorrhoea and syphilis **(Pharmacology)** **Prof. Al Humayyd**	**8:00 -10:00am** Small Group Learning(PBL) **Case 4 Part 2**
9:00-10:00am Candida infection + trichimonas vaginalis, bacterial vaginosis **(Microbiology)** **Dr. Ibrahim Al Khalife**			**9:00 - 10:00am** Human Papilloma virus **(Obstetrics and Gynecology)** **Dr. Khalid Akoor**	
10:00-11:00am Syphilis + gonorrhoea and chlamydia **(Microbiology)** **Dr. Abdulaziz Al Khattaf**	**10:00- 12:30 am** **SALAM**		**10:00 - 12:00pm** **Practical** Sexually transmitted diseases **(Microbiology)** **Prof. Ali Somily**	**10:00 - 11:00am** **Self-Directed Learning**
11:00- 12:00pm Transplacental Infection **(Microbiology)** **Dr. Abdulaziz Al Khattaf**				**11:00- 12:00pm** Systematic manifestations of AIDS **(Pathology)** **Prof. Ammar Al Rikabi**
Lunch **12:00- 1:00 pm**		**Lunch** **12:00- 1:00 pm**	**Lunch** **12:00- 1:00 pm**	**Lunch** **12:00- 1:00 pm**
1:00 - 2:00 pm AIDS **(Immunology)** **Prof. Zahid Shakoor**	**1:00 -2:00pm** **Self-Directed Learning**	**1:00 - 2:00 pm** Herpes simplex and genital warts **(Microbiology)** **Dr. Abdulkarim Al Hetheel**	**1:00 - 2:00 pm** **Self-Directed Learning**	**1:00 -3:00pm** **Improving Medication safety** **(Patient Safety)** **Dr. Ishfaq Bukhari**
2:00-3:00pm AIDS **(Microbiology)** **Dr. Abdukarim Al Hetheel**	**2:00 -3:00pm** **Self-Directed Learning**	**2:00-3:00pm** **Self-Directed Learning**	**2:00-3:00 pm** **Self-Directed Learning**	

WEEK 6 – REPRODUCTION BLOCK (Male A)				
Week (6) 15/04/2018 to 19/04/2018				
CONSOLIDATION WEEK				
CHAIR PERSON : Prof. Malak Al Hakeem				
CO-CHAIR: Prof. Saeed Abdulmakarem				
Sunday 15 April 2018	**Monday 16 April 2018**	**Tuesday 17 April 2018**	**Wednesday 18 April 2018**	**Thursday 19 April 2018**
Consolidation	**Consolidation**	**Consolidation**	**Consolidation**	**Consolidation**

***Week 6: Consolidation week; from 15 April 2018 to 19 April 2018**
***Week 9; Final MCQ 06 May 2018**
***Week 9; OSPE & SAQ 09 May 2018**

Plagiarism

Plagiarism is a voluntary act to copy sentences and give a misleading impression that the text is created by the person whose name appears on the work. For example an assignment submitted as part of the requirements of assessment of a subject.

Plagiarism may include plagiarism of ideas and or plagiarism of text (sentences or paragraphs). It also may include the use of diagrams, tables, images, cartoons etc without acknowledging the original creator of the work.

The act of copy-and-paste writings even if the aim is to produce a good assignment with well-structured English statements is unethical and when discovered could cause serious consequences including disciplinary action. Students need to construct statements in their own words and refer to the correct references related to what they have written and included in their assignment/work. Giving credit and acknowledgement to the original authors/creators are valued by the academic community as it reflects an ethical and professional attitude.

Why is plagiarism wrong?

Universities, higher education institutes and scientific communities consider plagiarism as a major problem for a number of reasons:

- It is an act of stealing ideas and the work of original authors/creators.
- It does not represent acceptable professional, ethical or scientific behaviour.
- It raises doubts about the credibility of the person/group of people who committed such act.

How can teachers/college discover an act of plagiarism?

There are a number of software programs such as iThentcate and many others available to detect the act of plagiarism. Some of these programs are available free online.

These tools can locate the places and sentences where students have copied and the original resource (articles, manuscripts, papers, books, websites) for such statements/paragraphs or images.

What are the consequences of plagiarism?

Students who commit plagiarism will be exposed to disciplinary action including the failure of the subject concerned provided that such act has been confirmed with evidence.

Assessment of Students in the Block

In order to pass the block, you must obtain a minimum final block grade of D (the grading guide attached as appendix[1]), this grade is a composition from several block requirements, which can be subdivided as:

1- Attendance
2- Tutor assessment
3- Written Exams
4- OSPE (Objective Structured Practical Examination)

The final grade is a composition of the grades obtained for the specified block requirements, calculated as follows:

- Continuous Assessment (Tutor Assessment and Attendance) : 15%
- Written Examinations (MCQ) : 55%
    - Mid-Block Exam 25%
    - Final Block Exam 30%
- OSPE : 30 %

TOTAL **: 100 %**

1. **Attendance :**

Students are required to attend not less than 75% of all educational activities during the block. These include small group teaching, lectures, practical sessions, skills training sessions and integrated clinical sessions.

Your attendance will be recorded during all sessions. Failure to meet this requirement without a valid explanation will result in exclusion from the final examination. On the other hand, your presence will be rewarded by assigned marks.

2. **Tutor Assessment in Large and Small groups (Continuous Assessment):**

During each session, your individual efforts will be evaluated by your tutor. The tutors are instructed to evaluate two aspects:

a. The extent to which you demonstrate that you study and prepare yourself thoroughly between the two sessions (i.e., preparation).

b. The extent to which you actively contribute during group discussion (i.e., participation). Your grade for each session depends upon both your preparation and your participation. The grade will be on the scale from "5", "4", "3", "2", or "1". Which have the following general descriptors:

5 = Outstanding (Excellent)
4 = Very good
3 = Good
2 = Average
1 = Poor

The block contains two sessions each week, so the maximum amount of 'participation points' you are able to obtain will be from two sessions multiplied by the number of weeks. The total participation points will be recalculated according to the weight for each participation in the total assessment.

Your tutor can give you more information about the evaluation of your participation. The details of these evaluation also given in "Tutor Assessment of Student" form.

3. **Written Examination:**

   a. Mid block exam 25% : In the form of MCQs, these are prepared mainly from sessions presented to the students in large group. This exam will consist of 50 MCQs that will assess factual knowledge.

   b. Final written exam 30%: at the end of the block in form of MCQs, that are prepared mainly from sessions and presented to the students. This exam will consist of 80 MCQs that will assess factual knowledge too.

4. **Objective Structured Practical Examination (OSPE):**

This comprises 30% of the marks. It is a practical examination at the end of the block. The OSPE examination will consist of 15-20 OSPE stations. Each station will take about 5 minutes, which contains a mix of slide show and some practical sessions. The purpose of the OSPE stations is to test your deeper understanding of the basic sciences. The OSPE will take place at the end of each block.

Block Evaluation

The block evaluation uses the following three data sources:

1. Student Feedback
2. Tutor Feedback
3. Student Results

Methods of student's formative assessment:

- Self evaluation
- Peer evaluation
- Tutor evaluation (both summative & formative)
- Assignments

Assessment in Professionalism

The assessment of professionalism will be conducted separately and will be based on students' portfolio. Details regarding training students to construct their portfolios and distribution of marks are discussed in details in the professionalism booklet.

LEARNING RESOURCES

The list below comprises the key textbooks and learning resources which have been prescribed and recommended for use in the undergraduate medical course at King Saud University. It is expected that you have your own copy of prescribed textbooks and use them as one of your main resources in learning. Before making any purchases, you might carefully examine all other recommended textbooks in an area and chose the text that matches with your needs and your learning style. Although all these texts are available in the Medical Library, you might need to purchase texts that you use frequently in these years as the demand upon library texts is usually high.

Medical Dictionary

Prescribed :

Martin EA (2015). Oxford Concise Medical Dictionary.9th Ed. Oxford: Oxford University Press.

Recommended textbooks:

Dorland (2012). Dorland's Pocket Medical Dictionary with CD-ROM, 29th Edition, Elsevier, UK.

Dorland (2011). Dorland's Illustrated Medical Dictionary with CD-ROM, 32nd Edition, Elsevier, UK.

Anatomy & Embryology

Prescribed textbook:

Drake RL, Vogl W and Mitchell AWM (2014). Gray's Anatomy for Students. Philadelphia: Elsevier Churchill Livingstone.

Snell RS (2005). Clinical Anatomy for Medical Students. 7th ed. Philadelphia: Lippincott Williams & Wilkins.

Schoenwolf GC, Breyl SB, Baurer PR, Fancis-West PH. (2014). Human Embryology. New York: Churchill Livingstone.

Recommended textbooks:

McMinn RH (2004). McMinn's Color Atlas of Human Anatomy. Fifth Edition. Mosby Publisher, UK.

Moore KL and Dalley AF (2005). Clinically Oriented Anatomy. Philadelphia: Lippincott Williams & Wilkins.

Netter FH (2006). Atlas of Human Anatomy. 4th ed. Philadelphia: Saunders WB.

Agur AMR and Dalley AF (2005). Grant's Atlas of Anatomy. 11th ed. Philadelphia: Lippincott Williams & Wilkins.

More KL (2002). The Developing Human. Philadelphia: Saunders WB.

Sadler TW. (2005) Langman's Essential Medical Embryology. Philadelphia: Lippincott Williams & Wilkins.

Sadler TW. (2006) Langman's Medical Embryology. 10th ed. Philadelphia: Lippincott Williams & Wilkins.

Histology

Prescribed textbook:

Gartner LP (2016). Color Textbook of Histology. 4th ed. Philadelphia: Saunders WB.

Recommended textbooks:

Young B, O' Dowd G, Woodford P (2013). Wheater's Functional Histology. 6th ed. London: Churchill Livingstone.

Physiology

Prescribed textbook:

Rhoades R and Pflanzer R (2003). Human Physiology, 4th ed. London: Brooks/Cole.

Hall JE. Guyton and Hall Textbook of Medical Physiology (2015). 13th Edition. Churchill Livingstone, UK.

Recommended textbooks:

Koeppen BM and Stanton BA. (2010) Berne & Levy Physiology, updated Edition. 5th ed. London: Mosby

Sherwood L. (2006). Human Physiology: From Cells to Systems. 4th ed.Brooks/Cole Pub.Co: Sydney.

Fox SI. (2015). Fundamentals of Human Physiology. 14th ed. McGraw-Hill: Boston.

Saladin KS (2011). Anatomy and Physiology The Unity of FORM and FUNCTION. McGraw Hill Lange, USA

Barrett KE, Barman SM, Boitano S, Brooks HL (2015). Ganong's Review of Medical Physiology. 25th Edition. McGraw-Hill Publisher, UK.

Pharmacology

Prescribed textbook:

Rang HP, Ritter JM, Flowei RJ, Henderson G. (2016). Range & Dale's Pharmacology. 8th Edition. Churchill Livingstone, Elsevier, UK.

Recommended textbooks:

Bertram G. Katzung, Anthony J. Trevor (2014).13th Edition. Basic and Clinical Pharmacology. New York: McGraw Hill/Appleton & Lange.

Medical Biochemistry

Prescribed textbook:

Gaw A, Murphy MJ, Cowan RA, O'Reilly DJ, Stewart MJ, Sheperd J, (2009). Clinical Biochemistry: An Illustrated Colour Text. 4th ed. Churchill Livingstone, Elsevier.

Ferrier D, (2014). Lippincott's Illustrated Review Biochemistry. 6th ed. Lippincott Williams & Wilkins.

Recommended textbooks:

Murray RK, Roolwell VW, Bender D, Botham KM, Weill A, Kennelly PJ (2009). Harper's Illustrated Biochemistry. 28th Editions. McGraw Hill, Lange, New York.

Baynes J and Dominiczak M (2014). Medical Biochemistry. Elsevier.

Lieberman M, (2013).4th Edition. Mark's Basic Medical Biochemistry: A Clinical Approach. Lippincott Williams & Wilkins, New York.

Champe PC, Harvey RA, Ferrier DR (2008). Lippincott's Illustrated Reviews Biochemistry. 3th ed. Philadelphia: Lippincott Williams & Wilkins.

Microbiology & Parasitology

Prescribed textbook:

Murray P, Rosenthal K, Pfaller M, (2013). Medical Microbiology: Study smart with Student Consult. 7th ed. Elsevier.

Recommended textbooks:

Goering R, DoCkrell H, Zuckerman M, Wakelin D, Riott I, Mims C (2012). Mims' Medical Microbiology. 5th Edition. Mosby, UK.

John DT, Petri Jr (2006). Markell and Voge's Medical Parasitology. Ninth Edition. Elsevier, UK.

Greenwood D, Slack RC, Peutherer JF, Barer MR (2007). Medical Microbiology. Seventh Edition. Churchill Livingstone, UK.

Strohol WA. Lippincotts Illustrated Review Microbiology (2006). Second Edition. Lippincott Williams & Wilkins, New York.

Brooks GF, Butel JS, and Morse SA. (2004). Jawetz, Melnick, and Adelberg's Medical Microbiology. 23rd ed. New York: McGraw-Hill Co and Lange Appleton.

Engleberg NC (2013). Schaechter's Mechanisms of Microbial Disease. 5th ed. Philadelphia: Lippincott Williams & Wilkins.

Neva FA, Brown HW. (1994). Basic Clinical Parasitology. 6th ed. Connecticut: Prentice-Hall International Inc.

Chamberlain NR (2008). Medical microbiology & immunology. McGraw Hill Lange Publisher, UK.

Levinson WE (2010). Review of Medical Microbiology and Immunology. Eleventh-Edition, McGraw-Hill Publisher, UK

Pathology & Genetics

Prescribed textbook:

Kumar V, Abbas A, Aster L, (2013). Robbins Basic Pathology. 9th ed. Saunders. Philadelphia Elsevier

Hoffbrand V, Moss PAH, (2016). Hoffrand's Essential Hematology. 7th ed. Wiley Blackwell.

Nusbaum RL, McInnes RR, Willar HF, (2015). Thompson & Thompson Genetics in Medicine. 8th ed. Elsevier.

Recommended textbooks:

Kumar V, Abbas AK, and Fausto N (2004). Robbins and Cotran Pathologic Basis of Disease. 7th ed. Philadelphia: Saunders WB.

Young B, Stewart W. (2009). 5th Edition. Wheaters Basic Histopathology. A Colour Atlas and Text. Churchill Livingstone, Elsevier, UK.

Immunology

Prescribed textbook:

Owen J, Punt J, Stranford S, (2013) Kuby Immunology: Kindt, kuby Immunology. 7th ed. W.H. Freeman.

Recommended textbooks:

Delves PJ, Martin SJ, Burton DR, Riott IM (2012). Riott's Essential Immunology. 8th Edition. Elsevier.

Male D, Brostoff J, Roth DB, and Roitt I. (2006). Immunology. 7th ed. Edinburgh: Mosby.

PBL and Learning Skills

Prescribed textbook:

Azer SA (2006). Core Clinical Cases in Basic Biomedical Sciences. Hodder-Arnold, UK.

Azer SA (2008). Navigating Problem-Based Learning. Elsevier Australia, Australia.

Recommended textbook:

Kushner TK and Thomasma DC (2001). Dilemmas for Medical Students and Doctors in Training. Cambridge: University Press.

Communication Skills & Introduction to Clinical Medicine

Prescribed textbook:

Lloyd M, Bor R (2009). Communication Skills for Medicine. Elsevier.

Munro JF, Campbell IW (2006). Macleod's Clinical Examination. Tenth Edition. Churchill Livingstone, UK.

Talley NJ and O'Connor S. (2006). Pocket Clinical Examination. Melbourne: Blackwell Science.

Medicine

Kumar P and Clark M (2012). Clinical Medicine. 7th ed. Edinburgh: Elsevier Saunders.

Walker B.R, Colledge Nicki.R, Ralston Stuart.H, Penman I. (2014). Davidson's Principles and Practice of Medicine. 22nd ed. Edinburgh: Churchill Livingstone.

(In the preclinical years these two textbooks may help you in the preparation of your learning issues, you will also need them in the clinical years).

Professionalism

Prescribed textbook:

Feldman MD, Christensen JF (2014). Behavioural Medicine. A Guide for Clinical Practice. McGraw-Hill Lange, UK.

Stern DT (2006). Measuring Medical Professionalism. Oxford University Press, UK.

Spandorfer J, Pohl CA, Rattner SL, Nasca TJ (2010). Professionalism in Medicine. A case-based Guide for Medical Students. Cambridge University Press, UK.

KING SAUD UNIVERSITY
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Feedback to Students on PBL Performance

Year 2 (Academic Year 2017-2018)

Student's name:……Group number…….
Tutor's name……. Block: REPRODUCTION BLOCK

The feedback items are grouped under two main headings.
1= Deficient/lacking/or poor; 2= Working on it; 3= showing some improvement, 4= developed; 5=well developed (marks are allocated as follows: 1 mark for rank 1, 2 marks for rank 2, 3 marks for rank 3, 4 marks for rank 4, and 5 marks for rank 5, maximum mark is 5 for each group)

1. Learning and cognitive skills:

Ability to:	1	2	3	4	5
Identify problems in the case					
Generate hypotheses					
Build mechanisms					
Collect new information					
Interpret findings					
Identify learning issues					
Apply knowledge learnt					

Mark= /5

2. Interaction and participation to group function:

Ability to:	1	2	3	4	5
Work collaboratively with other members					
Take active roles such as scribing					
Communicate effectively					
Arrive to tutorials on time					
Demonstrate good manners					
Keep the group focused					
Share resources with others					

Mark = /5

Comments
……
……
……
……

Tutor's Name: Signature: Total Mark= /10

KING SAUD UNIVERSITY
College of Medicine
Department of Medical Education

Assessment of Student in PBL

Year 2 (Academic Year 2017-2018)

Student's name: ……..…Group number:……..
Tutor's name: …….Block: REPRODUCTION BLOCK

The assessment items are grouped under two main headings.
1= Deficient/lacking/or poor; 2= Working on it; 3= showing some improvement, 4= developed; 5=well developed (marks are allocated as follows: 1 mark for rank 1, 2 marks for rank 2, 3 marks for rank 3, 4 marks for rank 4, and 5 marks for rank 5, maximum mark is 5 for each group)

1. Learning and cognitive skills:

Ability to:	1	2	3	4	5
Identify problems in the case					
Generate hypotheses					
Build mechanisms					
Collect new information					
Interpret findings					
Identify learning issues					
Apply knowledge learnt					

Mark= /5

2. Interaction and participation to group function:

Ability to:	1	2	3	4	5
Work collaboratively with other members					
Take active roles such as scribing					
Communicate effectively					
Arrive to tutorials on time					
Demonstrate good manners					
Keep the group focused					
Share resources with others					

Mark = /5

Comments
……
……
……
……

Tutor's Name: Signature: Total Mark= /10

STUDENTS' EVALUATION OF THEIR PBL TUTOR

Date:_____
Tutor's Name:_____ Group No.:_____
Student: ☐ Peer: ☐ Other: ☐ Name (Optional):_____

How well did the tutor facilitate group process in the following regards? Please put a check (✓) in the box.

1.	Appropriately facilitated the brainstorming sessions.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
2.	Appropriately facilitated the hypothesis reorganization sessions.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
3.	Appropriately facilitated the reporting sessions.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
4.	Appropriately manage the time flow.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
5.	Help to keep the group focused on its task	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
6.	Provided a well balanced intervention within the group process, but avoided dominating.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
7.	Intervened when chairman or reporter needed.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
8.	Provided constructive positive and constructive feedback to the group as needed.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
9.	Encouraged positive and constructive feedback within the group about its performance	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
10.	Showed enthusiasm.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
11.	Helped to create a supportive group climate.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
12.	Encouraged logical and critical thinking.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐
13.	Overall rating of the tutor.	1 ☐	2 ☐	3 ☐	4 ☐	5 ☐

Number Code Values:

5- EXCELLENT 4- VERY GOOD 3-GOOD 2- FAIR 1- POOR

STUDENT RATING OF LECTURE

Date:_____Subject:_____Instructor:_____

Purpose:
This form is designed as an observation tool to rate the performance of each instructor in the different sessions. It is intended to provide a tool for lecturer improvement.

Directions:

Using the anchors below, check (✓) your rating for each item below. Check (✓) N/A for items that do not apply.

No.	Standard Procedure	5	4	3	2	1	N/A
1	Started and ended class on time.						
2	Presented overview of content and objectives.						
3	Presented information according to objectives.						
4	Used relevant examples and illustrations (graphs, etc.) to explain major ideas						
5	Used alternative explanations when necessary.						
6	Made efficient use of questions with students.						
7	Covered all contents/objectives.						
8	Exhibited enthusiasm.						
9	Encouraged students to express themselves.						
10	Asked questions prior to closure						
11	Summarized major points/related contents to objectives.						
12	Amount you learned in the class was:						

Mention 3 strong points in this lecture:

1. _____
2. _____
3. _____

Mention 3 points for Improvement:

1. _____
2. _____
3. _____

Your name: (optional)_____