



Course Syllabus - MBBCh

1. Course Title: Endocrine and Reproductive Module		Course code: (ENR31)
2. Credit/contact hours:	122	
3. Number of weeks	5	
4. Level/year at which this course is offered:	Year 3	
5. Pre-requisites for this course (if any): Year 2 S2		
6. Co-requisites for this course (if any):		

Course Description

This course is offered to 3rd year medical students to aptly prepare them for the clinical phase. It is intended to consolidate the knowledge gained in previous courses, in an integrated and holistic approach, to learn the development, structure and function of the Endocrine and Reproductive systems. It enables the learners to apply the foundational principles for diagnosis and management of disorders in these systems, with a focus on disease prevention. It adopts many student-centered strategies like Problem Based Learning (PBL), directed self-learning, clinical skills, and Integration of Clinical Medicine (ICM) sessions, with integrated theoretical and practical assessment at the end of the semester.

Course Learning Outcomes

CLOs		Aligned-POs
Knowledge:		
K1	Describe the embryological development, gross and microscopic appearance of the endocrine and reproductive organs in health and disease.	A1
K2	Explain the functions of hormones in relation to homeostasis and metabolism, including their effect on growth and health of reproductive organs.	A1
K3	Correlate alterations in the structure and function of the endocrine and reproductive organs with frequently associated diseases.	A2
K4	Apply the principles of Biomedical sciences in clinical context for diagnosis and management of endocrine and reproductive diseases.	B2
K5	Describe the Public health issues associated with the common endocrine and reproductive diseases in the region and elsewhere in the world.	A1
Skills:		
S1	Take history and perform a focused physical examination of a patient presenting with endocrine and reproductive symptoms.	B1

CLOs		Aligned-PLOs
S2	Interpret results of commonly performed invasive (Hematological, serological, cytological, histopathological, microbiological etc.) and non-invasive (radiological) investigations used for determining the normal structure and function as well as for diagnosing and managing patients with endocrine and reproductive system diseases.	B2
S3	Write model prescription for different medications used in the management of endocrine and reproductive problems.	B3
Attitudes:		
A1	Demonstrate awareness of the impact of common endocrine and reproductive disorders on the quality of life of the individual and community and plan preventive strategies.	C1
A2	Demonstrate the ability to work independently and through teamwork for management of common clinical presentations of endocrine and reproductive disorders.	C2

Course Delivery Plan

Theme	Week	COURSE TITLE	Teaching Modality	Duration	Department	Faculty
		Introduction to the endocrine and reproductive module	L	1	Physiology	Dr. Sadaf
Abnormal weight gain	Week 1 (21 August-27 August)	Revision of the Pituitary, thyroid, pancreas & adrenal glands	CBL	1	Anatomy	Dr. Shifan
		Biochemical aspects of hormones	L	1	Biochemistry	Prof. Nagla
		Pituitary gland I	L	1	Histology	Prof. Nadia
		Hormones; classes & mechanism of action	L	1	Physiology	Dr Aprajita
		Hypothalamic-Hypophyseal Connections	L	1	Physiology	Dr Aprajita
		Pituitary gland II & Pineal body	L	1	Histology	Prof. Nadia
		Ant. Pituitary gland hormones	SBIL	1	Physiology	Dr Aprajita
		Post pituitary hormones	SBIL	1	Physiology	Dr Aprajita
		DISEASES OF PITUITARY	CBL	1	Pathology	Dr. Mariam
		Pharmacology of hypothalamic and pituitary hormones	L	1	Pharmacology	Dr. Eslam
		Thyroid & Parathyroid	L	1	Histology	Prof. Nadia
		Thyroid hormones (synthesis, transport, receptors)	L	1	Physiology	Dr Aprajita

		Thyroid hormones (action, regulation and TFTs)	L	1	Physiology	Dr Aprajita
		DISEASES OF THYROID	L	1	Pathology	Dr. Mariam
		Practical Pathology	P	1	Pathology	Dr. Mariam
		Epidemiology and prevention of thyroid disorders	CBL	1	Public health	Dr. Michael
		Anti-Thyroid drugs	L	1	Pharmacology	Dr. Eslam
		Hormones regulating calcium homeostasis	L	1	Physiology	Dr Aprajita
		DISEASES PARATHYROID	CBL	1	Pathology	Dr. Mariam
Polydipsia and polyphagia	Week 2 (28 August-03 September)	Hormonal and Non-Hormonal Agents/treatment of osteoporosis	L	1	Pharmacology	Dr. Eslam
		Endocrine pancreas (insulin receptors and functions)	L	1	Physiology	Dr. Sadaf
		Endocrine pancreas (regulation of insulin secretion, glucose homeostasis)	L	1	Physiology	Dr. Sadaf
		Glucagon, hyper and hypoglycemia	SBIL	1	Physiology	Dr. Sadaf
		DIABETES MELLITUS 1	L	1	Pathology	Prof. Ghazala
		Insulin	L	1	Pharmacology	Dr. Rania
		DIABETES MELLITUS 2	L	1	Pathology	Prof. Ghazala
		Oral Hypoglycemics I	L	1	Pharmacology	Dr. Rania
		Oral Hypoglycemics II	L	1	Pharmacology	Dr. Rania
		Practical: Case based prescriptions	P	1	Pharmacology	Dr. Rania
		Epidemiology and prevention of Diabetes mellitus	CBL	1	Public health	Dr. Michael
		Suprarenal gland	L	1	Histology	Prof. Nadia
		Practical Histology	P	1	Histology	Prof. Nadia
		Adrenal medullary hormones	L	1	Physiology	Dr. Aprajita
		Adrenal cortical hormones	L	1	Physiology	Dr. Aprajita
		Regulation of Adrenal cortical hormones	SBIL	1	Physiology	Dr. Aprajita
		DISEASES of ADRENAL GLAND 1	L	1	Pathology	Prof. Ghazala
		DISEASES of ADRENAL GLAND 2	SBIL	1	Pathology	Prof. Ghazala

		Corticosteroids I	L	1	Pharmacology	Dr. Eslam
Genital ulcers	Week 3(04 September-10 September)	Corticosteroids II and adrenocortical antagonists	SBIL	1	Pharmacology	Dr. Eslam
		Practical: Case based prescriptions	P	1	Pharmacology	Dr. Eslam
		Development of gonads	SBIL	1	Embryology	Dr. Shifan
		Development of Duct system & external genitalia	CBL	1	Embryology	Dr. Shifan
		Pelvic wall, pelvic floor, pelvic fascia	Tutorial	1	Anatomy	Dr. Shifan
		Male genital system	L	1	Anatomy	Prof. Shefaa
		Practical Anatomy	P	2	Anatomy	Dr. Shifan
		Testis	L	1	Histology	Prof. Nadia
		Testis & Epididymis	L	1	Histology	Prof. Nadia
		Microscopic structure of accessory male reproductive organs	Tutorial	1	Histology	Prof. Nadia
		Practical histology	P	1	Histology	Prof. Nadia
		Control of gonadal function, puberty	L	1	Physiology	Dr. Sadaf
		testicular functions and control of spermatogenesis	L	1	Physiology	Dr. Sadaf
		Testosterone hormone and its regulation	L	1	Physiology	Dr. Sadaf
		Sexually Transmitted diseases; Gonococci HIV)	L	1	Microbiology	Prof. Magda
		Neisseria gonorrhoeae	L	1	Microbiology	Prof. Magda
		Syphilis (Treponema Pallidum)	L	1	Microbiology	Prof. Magda
		Sexually transmitted parasites	SBIL	1	Parasitology	Dr.Dina
		DISEASES OF male external genitalia	Tutorial	1	Pathology	Dr. Mariam
		DISEASES OF THE TESTIS 1	L	1	Pathology	Prof. Ghazala
DISEASES OF THE TESTIS 2	SBIL	1	Pathology	Prof. Ghazala		
DISEASES OF THE PROSTATE	CBL	1	Pathology	Dr. Mariam		
Epidemiology and prevention of STDs and AIDS	L	1	Public health	Dr. Michael		

Abnormal vaginal bleeding	Week 4 (11 September-17 September)	Epidemiology and prevention of reproductive cancers (Male and female)	Tutorial	1	Public health	Dr. Michael
		Reproductive Health	L	1	Public health	Dr. Michael
		PRACTICAL PATHOLOGY	P	1	Pathology	Dr. Mariam
		Androgens & Anabolic Steroids	L	1	Pharmacology	Prof. Tasneem
		Female genital system I	L	1	Anatomy	Prof. Shefaa
		Female genital system II	CBL	1	Anatomy	Prof. Shefaa
		Practical Anatomy	P	2	Anatomy	Dr. Shifan
		Ovary	L	1	Histology	Prof. Nadia
		Ovary, Fallopian tube	L	1	Histology	Prof. Nadia
		Ovarian and uterine cycle	L	1	Physiology	Dr. Sadaf
		Uterus, Vagina	Tutorial	1	Histology	Prof. Nadia
		Ischio-anal Fossa	L	1	Anatomy	Prof. Shefaa
		Urogenital Traingle, Pudendal nerve, vessels	L	1	Anatomy	Prof. Shefaa
		Radiographs (HSG,Ultrasound)	P	2	Anatomy	Dr. Shifan
		Chlamydiae trachomatis and vaginitis	CBL	1	Microbiology	Prof. Magda
		Placenta & Mammary gland	Tutorial	1	Histology	Prof. Nadia
		Practical Histology	P	1	Histology	Prof. Nadia
		HIV and AIDS	SBIL	1	Microbiology	Prof. Magda
		Cervical Infections & Pelvic Inflammatory diseases (PID)	CBL	1	Microbiology	Prof. Magda
		DISEASES OF THE OVARIES 1	CBL	1	Pathology	Prof. Ghazala
		DISEASES OF THE OVARIES 2	SBIL	1	Pathology	Prof. Ghazala
		Diseases of the Cervix and female external genitalia	CBL	1	Pathology	Dr. Mariam
		DISEASES OF THE UTERUS	L	1	Pathology	Dr. Mariam
		DISEASES OF THE UTERUS & FALLOPIAN TUBE	Tutorial	1	Pathology	Dr. Mariam
PRACTICAL PATHOLOGY	P	1	Pathology	Dr. Mariam		
Ovarian hormones	L	1	Physiology	Dr. Sadaf		

		Fertilization, implantation, pregnancy tests, indicators of ovulation	L	1	Physiology	Dr. Aprajita
Breast lump	Week 5 (18 September-24 September)	Changes of pregnancy and functions of placenta	SBIL	1	Physiology	Dr. Aprajita
		DISEASES OF THE PLACENTA	SBIL	1	Pathology	Prof. Ghazala
		PRACTICAL PATHOLOGY	P	1	Pathology	Dr. Mariam
		Prolactin and Mammary gland	L	1	Physiology	Dr. Aprajita
		DISEASES OF THE BREAST 1	L	1	Pathology	Prof. Ghazala
		DISEASES OF THE BREAST 2	SBIL	1	Pathology	Prof. Ghazala
		PRACTICAL PATHOLOGY	P	1	Pathology	Dr. Mariam
		Hormonal Contraceptives, estrogens/progestins	L	1	Pharmacology	Prof. Tasneem
		Oxytocics & management of threatened Abortion	CBL	1	Pharmacology	Prof. Tasneem
		Practical: Case based prescriptions	P	1	Pharmacology	Prof. Tasneem
		Family Planning Program	CBL	1	Public health	Dr. Michael
		Genital ulcers and fetus as allograft	L	1	Microbiology	Prof. Magda
		Congenitally transmitted parasitic diseases	L	1	Parasitology	Dr.Dina
		Practical	P	1	Parasitology	Dr.Dina
		Practical	P	1	Microbiology	Prof. Magda
		Safe Motherhood	L	1	Public health	Dr. Michael

Teaching and Assessments

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	Knowledge		
K1	Describe the embryological development, gross and microscopic appearance of the endocrine and reproductive organs in health and disease.	L SBIL CBL Tutorial PBL	MCQ's Oral OSPE

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
		Practical Session	
K2	Explain the functions of hormones in relation to homeostasis and metabolism, including their effect on growth and health of reproductive organs.	L SBIL CBL Tutorial PBL Practical Session	MCQ's Oral OSPE
K3	Correlate alterations in the structure and function of the endocrine and reproductive organs with frequently associated diseases.	L SBIL CBL Tutorial PBL Practical Session	MCQ's Oral OSPE
K4	Apply the principles of Biomedical sciences in clinical context for diagnosis and management of endocrine and reproductive diseases.	L SBIL CBL Tutorial PBL Practical Session	MCQ's Oral OSPE
K5	Describe the Public health issues associated with the common endocrine and reproductive diseases in the region and elsewhere in the world.	L Tutorial PBL	MCQ's Oral OSPE
Skills			
S1	Take history and perform a focused physical examination of a patient presenting with endocrine and reproductive symptoms.	Practical Session (Clinical Skills)	OSPE
S2	Interpret results of commonly performed invasive (Hematological, serological, cytological, histopathological, microbiological etc.) and non-invasive (radiological) investigations used for determining the normal structure and function as well as for diagnosing and managing patients with endocrine and reproductive system diseases.	L SBIL CBL Tutorial PBL Practical Session	MCQ's Oral OSPE
S3	Write model prescription for different medications used in the	Practical Session	OSPE

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	management of endocrine and reproductive problems.		
Attitude			
A1	Demonstrate awareness of the impact of common endocrine and reproductive disorders on the quality of life of the individual and community and plan preventive strategies.	L Tutorial PBL	MCQ's Oral OSPE
A2	Demonstrate the ability to work independently and through teamwork for management of common clinical presentations of endocrine and reproductive disorders.	Tutorial PBL	MCQ's OSPE

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score	Date
1	Mid-semester Exam (MCQ's)	Week 5	15%	24 September 2023
2	Embedded assessment (Clinical skills, PBL, Student participation)	Throughout the module	15%	
3	Final exam (MCQ's, Oral, OSPE)	End of semester	70%	21-29 Nov 2023

*Assessment task (i.e., written test, oral test, oral presentation, group project etc.)

Learning Resources and Facilities

1. Learning Resources

Required Textbooks	<ul style="list-style-type: none"> Anatomy: Richard Drake PhD (Author), A. Wayne Vogl (Author), Adam W. M. Mitchell (2019). Gray's Anatomy for Students (4th edition). Arcturus Publishing. Community Medicine: Kenneth Fuller Maxcy, Milton Joseph Rosenau, John M. Last, Robert B (2019). Maxcy-Rosenau-Last public health & preventive medicine (10ed). Elsevier Histology: Anthony L. Mescher Junqueira (2018). Basic histology text and atlas (15th ed)
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	<ul style="list-style-type: none"> • Microbiology: Jawetz, Melnick & Adelberg's medical microbiology. (1991). Norwalk, Conn. : Appleton & Lange, • Parasitology: John, D. T., & Petri, W. A. (2013). Markell and Voge's medical parasitology-e-book. Elsevier Health Sciences. • Agur, Anne M.R, Dalley II, Arthur F. (2009). Grant's: Atlas of anatomy (Twelfth edition). Philadelphia: Wolter Kluwer. • Pathology: Kumar, V., Abbas, A. K., & Aster, J. C. (2017). Robbins Basic Pathology (10th ed.). Elsevier - Health Sciences Division. • Goodman, L., Gilman, A. and Brunton, L., 2008. Goodman & Gilman's manual of pharmacology and therapeutics. New York: McGraw-Hill Medical. • Physiology: Hall, J. E. (2021). Guyton and hall textbook of medical physiology (14th ed.). W B Saunders.
Essential References Materials	<ul style="list-style-type: none"> • Histology:Leslie P. Gartner, James L. Hiatt (2018) Color Atlas and text, histology (7th ed.) • Cornelissen, C. N., Harvey, R. A., & Fisher, B. D. (2012). Microbiology (Vol. 3). Lippincott Williams & Wilkins. • Paniker, C. J. (2007). Textbook of medical parasitology (No. Ed. 6). Jaypee Brothers Medical Publishers (P) Ltd. • Pathology: Strayer DS, Rubin E, Saffitz JE, Schiller AL (2019). Rubin's Pathology: Mechanisms of Human Disease. Lippincott-Wolters Kluwer. • Katzung, Bertram G. (2018). Basic & clinical pharmacology (14th). New York: McGraw-Hill.
Electronic Materials	<ul style="list-style-type: none"> • Amboss • Aquifer • Access-pharma • Web-Pathology • Up to date • https://accesspharmacy.mhmedical.com/
Other Learning Materials	Library resources, Handouts

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classrooms, laboratories, demonstration rooms, simulation lab, Museums
Technology Resources (AV, data show, Smart Board, software, etc.)	AV, data show, Smart Board, LMS
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	Projection microscope

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