



Course Syllabus - MBBCh

1. Course Title: Endocrine and Reproductive Module		Course code: (ENR31)
2. Credit/contact hours:	134	
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 functional physiology of hormones in relation to homeostasis and metabolism, including their effect on growth and the health of reproductive organs.	A1
K3	Correlate alterations in the structure and function of the Endocrine and Reproductive organs it with frequently associated clinical manifestations of diseases of these systems.	A2
K4	Describe the use of hormones, their derivatives, and other pharmacological agents used in the treatment of various endocrine and reproductive disorders.	A1
K5	Apply the principles of basic sciences for management of common Endocrine and Reproductive disorders in clinical scenarios.	B2
K6	Describe the Public health issues associated with the common endocrine and reproductive diseases in the region and elsewhere in the world.	A1

CLOs		Aligned-PLOs
K7	Analyze clinical scenarios of Endocrine and Reproductive systems diseases, utilizing knowledge of basic sciences and diseases	A3
Skills:		
S1	Take history and perform a focused physical examination of a patient presenting with Endocrine and Reproductive symptoms.	B1
S2	Interpret results of commonly performed invasive (Hematological, serological, cytological, histopathological, microbiological etc.) and non-invasive (radiological) investigations used for diagnosing and managing patients with Endocrine and Reproductive system diseases.	B2
S3	Write model prescription for different medications used in 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

Batch 35-Y3S1- AY-2022-23 (Study Plan)						
Endocrine and reproductive module						
Theme	Week	COURSE TITLE	Teaching Modality	Duration	Department	Faculty
	Week 1	Hormones; classes & mechanism of action	Bio	1	Physiology	Prof Nagla
		Revision of the Pituitary, thyroid, pancreas & adarenal glands	SDL	1	Anatomy	Dr. Shifan
		Hypothalamic-Hypophyseal Connections	L	1	Physiology	Prof. Abeer
		The ant. Pituitary gland (GH)	SBIL	1	Physiology	Prof. Abeer
		Pituitary gland I	L	1	Histology	Prof. Nadia
		Pituitary gland II & Pineal body	SGD	1	Histology	Prof. Nadia
		The post pituitary gland (ADH)	SDL	1	Physiology	Prof. Abeer
		The post pituitary gland (Oxytocin)	SDL	1	Physiology	Prof. Abeer

Diseases of Pituitary and Thyroid Gland		DISEASES OF PITUITARY	SDL	1	Pathology	Dr. Mariam
		The thyroid gland (synthesis, transport, TH receptors)	CAL	1	Physiology	Prof. Abeer
		Thyroid & Parathyroid	L	1	Histology	Prof. Nadia
		The thyroid gland (TH actions)	L	1	Physiology	Prof. Abeer
		The regulation of TH & thyroid function tests	SGD	1	Physiology	Prof. Abeer
		DISEASES OF THYROID1	SBIL	1	Pathology	Dr. Mariam
		DISEASES OF THYROID2	SDL	1	Pathology	Dr. Mariam
		Practical Pathology	P	1	Pathology	Dr. Mariam
		Thyroid Hormones & Anti-Thyroid drugs I	L	1	Pharmacology	Dr. Rania
		Thyroid Hormones & Anti-Thyroid drugs II	SBIL	1	Pharmacology	Dr. Rania
		The parathyroid gland (PTH)	SDL	1	Physiology	Prof. Abeer
		Calcitonin	L	1	Physiology	Prof. Abeer
		Calcium homeostasis	L	1	Physiology	Prof. Abeer
		DISEASES PARATHYROID	SBIL	1	Pathology	Dr. Mariam
		Hormonal Regulators of Bone mineral homeostasis	SDL	1	Pharmacology	Dr. Rania
	Non-Hormonal Agents/treatment of osteoporosis	L	1	Pharmacology	Dr. Rania	
Week 2		Endocrine pancreas (Insulin)	SDL	1	Physiology	Prof. Abeer
		Insulin receptors and regulation	L	1	Physiology	Prof. Abeer
		glucagon	SDL	1	Physiology	Prof. Abeer
		Glucose homeostasis	L	1	Physiology	Prof. Abeer
		Hyer- and hypoglycemia	SBIL	1	Physiology	Prof. Abeer
		DIABETES MELLITUS 1	L	1	Pathology	Prof. Ghazala
		DIABETES MELLITUS 2	L	1	Pathology	Prof. Ghazala
		Insulin I	L	1	Pharmacology	Dr. Rania

Diseases of Glucose homeostasis & Cushings Disease	Insulin II	SBIL	1	Pharmacology	Dr.Rania
	Insulin III	CBL	1	Pharmacology	Dr.Rania
	Oral Hypoglycaemics I	SBIL	1	Pharmacology	Dr.Rania
	Oral Hypoglycaemics II	SDL	1	Pharmacology	Dr.Rania
	Practical: Case based prescriptions	P	1	Pharmacology	Dr.Rania
	Epidemiology of Diabetes mellitus	L	1	Community	Dr. Sahar
	Suprarenal gland	SDL	1	Histology	Prof. Nadia
	Practical Histology	P	1	Histology	Prof. Nadia
	The adrenal medulla (E & NE)	SDL	1	Physiology	Prof. Abeer
	The adrenall cortex (aldosterone)	L	1	Physiology	Prof. Abeer
	The adrenal cortex (cortisol)	L	1	Physiology	Prof. Abeer
	The adrenal cortex regulation	L	1	Physiology	Prof. Abeer
	DISEASES of ADRENAL GLAND 1	L	1	Pathology	Prof. Ghazala
	DISEASES of ADRENAL GLAND 2	SBIL	1	Pathology	Prof. Ghazala
	Pharmacology of the Adrenal Cortex and ACTH	SDL	1	Pharmacology	Dr.Rania
	Corticosteroids I	L	1	Pharmacology	Prof Tasneem
	Corticosteroids II	SBIL	1	Pharmacology	Prof Tasneem
	Adrenocortical Antagonists	SDL	1	Pharmacology	Prof Tasneem
	Practical: Case based prescriptions	P	1	Pharmacology	Prof Tasneem
	The pineal gland & Endocrine functions of the heart, kidney		1	Physiology	Prof. Abeer
Parasites affecting Endocrine System	SDL	1	Parasitology	Dr.Dina	
	Development of gonads	SBIL	1	Embryology	Prof. Shefaa

Diseases of MGT and Prostate	Week 3	Development of Duct system & external genitalia	CBL	1	Embryology	Prof. Shefaa
		Pelvic wall, pelvic floor , pelvic fascia	SGD	1	Anatomy	Prof. Shefaa
		Male genital system	SGD	1	Anatomy	Prof. Shefaa
		Practical Anatomy	P	2	Anatomy	Prof. Shefaa
		Testis	L	1	Histology	Prof. Nadia
		Testis & Epididymis	L	1	Histology	Prof. Nadia
		Spermatic cord, Vas deferens & Seminal vesicles	SGD	1	Histology	Prof. Nadia
		Prostate, Penis and male urethra	SDL	1	Histology	Prof. Nadia
		Practical histology	P	2	Histology	Prof. Nadia
		Control of gonadal function	L	1	Physiology	Prof. Abeer
		Puberty	L	1	Physiology	Prof. Abeer
		testicular functions and factors control spermatogenesis	L	1	Physiology	Prof. Abeer
		Testosterone hormone	L	1	Physiology	Prof. Abeer
		Regulation of testicular function	SDL	1	Physiology	Prof. Abeer
		Sexually Transmitted diseases; Gonococci, Treponema pallidum , HIV, ...	L	1	Microbiology	Prof. Magda
		Epidemiology of AIDS	L	1	Community	Dr. Sahar
		Gonorrhoea (Neisseria gonorrhoea)	L	1	Microbiology	Prof. Magda
		Sexually transmitted parasites	SBIL	1	Parasitology	Dr. Dina
		DISEASES OF THE PENIS & EPIDYDEMIS	SGD	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	SBIL	1	Pathology	Dr. Mariam
		Week 4		PRACTICAL PATHOLOGY	P	1
Epidemiology of Sexually transmitted diseases	CBL			1	Community	Dr. Sahar
Male sex hormones & Anabolic Steroids	SDL			1	Pharmacology	Dr. Rania

Diseases of Female genital tract		Female genital system I	L	1	Anatomy	Prof. Shefaa
		Female genital system II	CBL	1	Anatomy	Prof. Shefaa
		Practical Anatomy	P	2	Anatomy	Prof. Shefaa
		Ischio-anal Fossa	L	1	Anatomy	Prof. Shefaa
Week 5		Urogenital Traingle,Pudendal nerve, vessles	L	1	Anatomy	Prof. Shefaa
		Radiographs(HSG,Ultrasound)	P	2	Anatomy	Prof. Shefaa
		Ovary	L	1	Histology	Prof. Nadia
		Ovary, Fallopian tube	L	1	Histology	Prof. Nadia
		Syphilis (Treponema Pallidum)	L	1	Microbiology	Prof. Magda
		Female reproductive system and Ovarian cycle	L	1	Physiology	Prof. Abeer
		Uterine, cervical & vaginal cycles	L	1	Physiology	Prof. Abeer
		Indicators of ovulation	TBL	1	Physiology	Prof. Abeer
		The ovarian hormones (estrogens)	L	1	Physiology	Prof. Abeer
		The ovarian hormones (progesterone)	L	1	Physiology	Prof. Abeer
		Chlamydiae trachomatic genital Infection	L	1	Microbiology	Prof. Magda
		Vaginitis; Candidiasis, Bacterial vaginosis, Herpes simplex virus	SBIL	1	Microbiology	Prof. Magda
		DISEASES OF THE OVARIES 1	L	1	Pathology	Prof. Ghazala
		DISEASES OF THE OVARIES 2	SBIL	1	Pathology	Prof. Ghazala
		Uterus, Vagina	SGD	1	Histology	Prof. Nadia
		Placenta & Mammary gland	SDL	1	Histology	Prof. Nadia
		Practical	P	2	Histology	Prof. Nadia
		Cervical Infections & Pelvic Inflammatory diseases (PID), fetus allograft not rejected	L	1	Microbiology	Prof. Magda
		DISEASES OF THE UTERUS	SBIL	1	Pathology	Dr. Mariam

Diseases of the Placenta and the	DISEASES OF THE UTERUS & FALLOPIAN TUBE	SBIL	1	Pathology	Dr. Mariam
	Diseases of the Cervix	SBIL	1	Pathology	Dr. Mariam
	Diseases of External Genitalia	SDL	1	Pathology	Dr. Mariam
	PRACTICAL PATHOLOGY	P	1	Pathology	Dr. Mariam
	fertilization, implantation, & Pregnancy tests	PBL	1	Physiology	Prof. Abeer
	Changes of pregnancy	PBL	1	Physiology	Prof. Abeer
	Functions of placenta	L	1	Physiology	Prof. Abeer
	DISEASES OF THE PLACENTA	SBIL	1	Pathology	Prof. Ghazala
	PRACTICAL PATHOLOGY	P	1	Pathology	Dr. Mariam
	Estrogens & Progestins	SBIL	1	Pharmacology	Prof. Tasneem
	Hormonal Contraceptives I	L	1	Pharmacology	Prof. Tasneem
	Hormonal Contraceptives II	SP	1	Pharmacology	Prof. Tasneem
	Oxytocics & Drugs used in Threatened Abortion	L	1	Pharmacology	Prof. Tasneem
	Mother Health Care Program	L	1	Community	Dr. Sahar
	Safe Motherhood and Reproductive Health	SGD	1	Community	Dr. Sahar
	Prolactin and Mammary gland	L	1	Physiology	Prof. Abeer
	DISEASES OF THE BREAST 1	L	1	Pathology	Prof. Ghazala
	DISEASES OF THE BREAST 2	SBIL	1	Pathology	Prof. Ghazala
	PRACTICAL PATHOLOGY	P	2	Pathology	Dr. Mariam
	Practical: Case based prescriptions	P	1	Pharmacology	Prof. Tasneem
Family Planning Program	CBL	1	Community	Dr. Sahar	
Human Immunodeficiency virus (AIDS)	SBIL	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	

		Practical	P	1	Community	Dr. Sahar

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 systems in health and disease.	L SBIL CBL SDL SGD PBL Practical Session	MCQ's Oral OSPE
K2	Explain the functional physiology of hormones in relation to homeostasis and metabolism, including their effect on growth and the health of reproductive organs.	L SBIL CBL SDL SGD PBL Practical Session	MCQ's Oral OSPE
K3	Correlate alterations in the structure and function of the Endocrine and Reproductive organs it with frequently associated clinical manifestations of diseases of these systems.	L SBIL CBL SDL SGD PBL Practical Session	MCQ's Oral OSPE
K4	Describe the use of hormones, their derivatives, and other pharmacological agents used in the treatment of various endocrine and reproductive disorders.	L SBIL CBL SDL SGD PBL	MCQ's Oral

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
K5	Apply the principles of basic sciences for management of common Endocrine and Reproductive disorders in clinical scenarios	L SBIL CBL SDL SGD PBL Practical Session	MCQ's Oral OSPE
K6	Describe the Public health issues associated with the common endocrine and reproductive diseases in the region and elsewhere in the world.	L SDL SGD SP PBL	MCQ's Oral OSPE
K7	Analyze clinical scenarios of Endocrine and Reproductive systems diseases, utilizing knowledge of basic sciences and diseases	SBIL CBL PBL	MCQ's OSPE
Skills			
S1	Take History and Perform 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 diagnosing and managing patients with Endocrine and Reproductive system diseases.	L SBIL CBL SDL SGD PBL Practical Session	MCQ's Oral OSPE
S3	Write model prescription for different medications used in Endocrine and Reproductive problems.	Practical Session	OSPE
Attitude			
A1	Demonstrate awareness of the impact of common Endocrine and Reproductive disorders on the quality of life of the individual and	L SDL SGD SP PBL	MCQ's Oral OSPE

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	community and plan preventive strategies.		
A2	Demonstrate the ability to work independently and through teamwork for management of common clinical presentations of Endocrine and Reproductive disorders.	SDL PBL	MCQ's OSPE

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score	Date
1	First comprehensive Exam (MCQ's)	Week 5	19.3%	26 september 2022
2	Continuous assessments (Attendance, Quiz, projects, Assignments, Presentations Clinical Skills)	Through out the module	10.3%	
3	Final comprehensive exam (MCQ's, Oral, OSPE)	End of semester	70.4%	10 Dec 2022

*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) 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.
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	<ul style="list-style-type: none"> • 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

Couse Coordinator: Dr. Mariam: <dr.mariam@dmcg.edu>

Instructors:

Dr. Rasha: dr.rasha@dmcg.edu

Prof. Ghazala: [<dr.ghazala@dmcg.edu>](mailto:dr.ghazala@dmcg.edu)

Dr. Shifan: [<dr.shifan@dmcg.edu>](mailto:dr.shifan@dmcg.edu)

Prof. Naglaa: [<nagla@dmcg.edu>](mailto:nagla@dmcg.edu)

Prof. Tasneem: [<Prof.Tasneemsandozi@dmcg.edu>](mailto:Prof.Tasneemsandozi@dmcg.edu)

Prof. Magda: [<magda@dmcg.edu>](mailto:magda@dmcg.edu)

Dr. Dina Salah: [<dmohamed@dmcg.edu>](mailto:dmohamed@dmcg.edu)

Dr. Sahar [<dr.sahar@dmcg.edu>](mailto:dr.sahar@dmcg.edu)