UNIVERSITI SULTAN ZAINAL ABIDIN

FACULTY OF MEDICINE

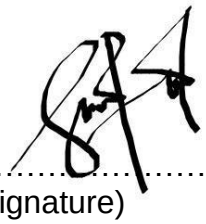
Student Guide Semester 4 Year 2

COURSE CODE: BMM21005
Session 2023/2024

COURSE 10:
Genitourinary System

DATE OF COURSE: April 21st, 2024 – May 23rd, 2024

Prepared by:



…… Date: 10 Oct 2023
(signature)

Dr. Sharifah Nany Rahayu Karmilla Syed Hassan
Course Coordinator
Preclinical MBBS Programme
Faculty of Medicine

Checked by:

……. Date:
(signature)

Prof. Madya. Dr. Farid Bin Mohd Noor
Head of School of Basic Medical Sciences
Faculty of Medicine

Endorsed by:

…….. Date:
(signature)

MBBS curriculum Committee Members
Medical Faculty, UniSZA

FACULTY OF MEDICINE

VISION

Faculty of Medicine aspires to be a reputable institution in producing virtuous, high-quality health professionals and researchers and providing excellent health services for sustainable community.

MISSION

Faculty of Medicine shall produce virtuous, proficient, globally competitive health professionals and researchers, producing high impact research and providing sustainable high-quality healthcare.

LOCATION

MKK 1	: Makmal Kemahiran Klinikal 1
MKK 2	: Makmal Kemahiran Klinikal 2
DT	: Dewan Theater
DKA	: Dewan Kuliah A
DKB	: Dewan Kuliah B
CL1	: Makmal Momputer 1
CL3	: Makmal Momputer 3
MBiokim	: Makmal Biokimia
MMikro	: Makmal Mikrobiologi
MHisto	: Makmal Histologi
BT1	: Bilik Tutorial 1
BT2	: Bilik Tutorial 2
BT3	: Bilik Tutorial 3
BT4	: Bilik Tutorial 4
BT5	: Bilik Tutorial 5
BT6	: Bilik Tutorial 6

Head of School of Basic Medical Sciences:

Head of School	HP	E-mail
Prof. Madya. Dr. Nor Farid Bin Mohd Noor	017-7161929	faridmnoor@unisza.edu.my

MBBS Coordinators:

Coordinators	Name	HP	E-mail
Course coordinator	Dr. Sharifah Nany Rahayu Karmilla Syed Hassan	017-9047095	karmillahassan@unisza.edu.my
ECE coordinator	Dr. Siti Hawa Bt Nordin	013-9343150	hawanordin@unisza.edu.my
PPD coordinator	Dr. Nur Farhana Che Lah	014-8323811	farhanachelah@unisza.edu.my
PBL coordinator	Dr. Malik Amonov	018-9164478	malikamonov@unisza.edu.my
E-learning coordinator (Preclinical)	Dr. Siti Fadziyah Mohamad Asri	019-3143717	fadziyahasri@unisza.edu.my
Scientific/Lab officer	Ahmad Faizzul Bin Md. Hasan	016-3731774	ahmadfaizzul@unisza.edu.my
Academic staff	Noor Amalina Eryani binti Abd Mubin	010-9196074	amalinaeryani@unisza.edu.my

Examination Coordinators (Preclinical):

Initial	Lecturer	HP	E-mail
ZAO	**Dr. Zaidatul Akmal Othman**	013-6249897	zaidaakmal@unisza.edu.my
NAS	Dr. Noor Azuin Suliman	019-7764007	azuinsuliman@unisza.edu.my
NB	Dr. Norhidayah Badya	012-9664220	norhidayahbadya@unisza.edu.my
NAAB	Dr. Noor Azlina Abu Bakar	017-4700395	noorazlina@unisza.edu.my
MA	Dr. Malik Amonov	018-9164478	malikamonov@unisza.edu.my
SHN	Dr. Siti Hawa Nordin	018-7764284	hawanordin@unisza.edu.my

Teaching Lecturers (School of Basic Medical Sciences)

Dept/Unit		Initial	Lecturer	H/P	E-mail
ANATOMY & PHYSIOLOGY	ANATOMY	**TFM**	**Assoc. Prof. Dr. Tg Fatimah Murniwati Tengku Muda**	**013-9860906**	**tg_murniwati@unisza.edu.my**
		NFMN	Assoc. Prof. Dr Nor Farid Mohd Noor	017-7161929	faridmnoor@unisza.edu.my
		NFCL	Dr. Nur Farhana Che Lah	014-8323811	farhanachelah@unisza.edu.my
		NM	**Dr. Norhazilah Muhamad**	**012-9536877**	**norhazilahmd@unisza.edu.my**
		YIAB	Dr. Yasrul Izad Abu Bakar	019-8929410	yasrulizadh@unisza.edu.my
		SFMA	Dr. Siti Fadziyah Mohamad Asri	019-3143717	fadziyahasri@unisza.edu.my
		NASR	Dr. Nur Atiqah Sa'hari @ Ramli	012-7099078	atiqahramli@unisza.edu.my
	PHYSIOLOGY	**MAM**	**Dr. Muhamad Afiq bin Mahayidin**	**014-8313413**	**afiqmahayidin@unisza.edu.my**
		NAAB	Dr. Noor Azlina Abu Bakar	017-4700395	noorazlina@unisza.edu.my
		MNMN	Dr. Mohd Nasir Mat Nor	012-9670004	nasirmnor@unisza.edu.my
		NAS	Dr. Noor Azuin Suliman	019-7764007	azuinsuliman@unisza.edu.my
		SAM	Dr. Samhani Ismail	019-9503103	samhanismail@unisza.edu.my
		ZAO	Dr. Zaidatul Akmal Othman	013-6249897	zaidaakmal@unisza.edu.my
		CMN	Dr. Che Mohd Nasril Che Mohd Nassir	017-9453568	nasrilnassir@unisza.edu.my
PATHOLOGY	CHEMICAL PATHOLOGY	**USMR**	Prof. Dr. U.S. Mahadeva Rao	011-16547654	raousm@unisza.edu.my
		NSMS	Dr. Nur Shafika Mohd Sairazi	013-2331485	shafikasairazi@unisza.edu.my
		SMAR	**Dr. Syamihah Mardhiah bt A Razak**	**013-2525228**	**syamihahrazak@unisza.edu.my**
		SNRK	Dr. Sharifah Nany Rahayu Karmilla Syed Hassan	017-9047095	karmillahassan@unisza.edu.my
		LHMA	Dr. Liyana Hazwani Binti Mohd Adnan	012-3694649	liyanahazwani@unisza.edu.my
	ANATOMIC PATHOLOGY	**NHAB**	**Dr. Nor Hidayah Abu Bakar**	**019-9388077**	**norhidayahabubakar@unisza.edu.my**
		AA	Dr. Azzahra binti Azhar	011-15621673	azzahraazhar@unisza.edu.my
		TZ	Dr. Thant Zin	016-9012440	thant@unisza.edu.my
	HAEMATOLOGY	**AD**	**Dr. Adibah binti Daud**	**013-3580309**	**adibahdaud@unisza.edu.my**
		SA	Dr. Sumaiyah binti Adzahar	019-5244589	sumaiyahadzahar@unisza.edu.my
	IMMUNOLOGY	**RAR**	Dr. Ras Azira Ramli	018-3684818	aziraramli@unisza.edu.my
		MA	Dr. Malik Amonov	018-9164478	malikamonov@unisza.edu.my
	MICROBIOLOGY	**NIAR**	Dr. Nor Iza A Rahman	019-9195062	noriza@unisza.edu.my
		YCC	Prof. Dr. Yeo Chew Chieng	019-9394557	yeocc@unisza.edu.my
		SIS	**Assoc. Prof. Dr.Salwani Ismail**	**012-3988260**	**salwani@unisza.edu.my**
		NB	Dr. Norhidayah Badya	012-9664220	norhidayahbadya@unisza.edu.my
		KAJ	**Dr. Kamariah binti Abdul Jalil**	**011-11181829**	**kamariahjalil@unisza.edu.my**
PHARMACOLOGY		**MSAA**	**Assoc. Prof. Dr. Marwan Saad Abdulrahman Azzubaidi**	**018-9066351**	**mazzubaidi@unisza.edu.my**
		SDA	Assoc. Prof. Dr. Saravanan A/L A. Dharmaraj	012-4089620	saravanandharmaraj@unisza.edu.my
		SYNJ	Dr. Siti Yusrina Nadihah Jamaludin	013-9288409	yusrinanadihah@unisza.edu.my
		SHN	Dr. Siti Hawa Nordin	018-7764284	hawanordin@unisza.edu.my

Teaching Lecturer (School of Clinical Medicine)

Unit	Initial	Lecturer	H/P	E-mail
Radiology	**HMAR**	Dr. Husbani binti Mohd Amin Rebuan	013-9387378	husbanimar@unisza.edu.my
Internal Medicine	**AM**	Dr. Al Mizan b Mustapa @ Ab Rahim	013-2858378	mizanmustapa@unisza.edu.my
	NH	Dr. Nor Hamizah binti Abdul Rahim	019-3357585	hamizahabdrahim@unisza.edu.my

Librarian

No.	Librarian	Tel	E-mail
1.		7817	

Scientific officer/Laboratory staff

Initial	Name of Scientific Officers / Asst. ScientificOfficers / MLTs / Laboratory Assistants	Tel
Faizzul	En. Ahmad Faizzul Md. Hasan (SO)	016-3731774
Rodziah	Pn. Rodziah Kari (SO)	013-9284186
Hafzan	Pn. Hafzan binti Mohamad (SO)	011-10980815
Faizal	En. Mohd Faizal bin Shafie (ASO)	017-9792252
Azlina	Cik Azlina Mamat (MLT)	019-2574836
Faradi	En. Mohd Faradi Abu Bakar (LA)	012-9598951
Khairul	En. Ahmad Khairul Nizam Hussin (LA)	019-9045771
Azuan	En. Azuan bin Abdullah (LA)	019-9829499
Tajul	En. Tajul Zahili bin Mohamed (LA)	019-9404385
Afif	En. Muhamad Afif bin Khamaruddin (LA)	
Rostamizi	En. Rostamizi bin Mohd (LA)	

COURSE 10: GENITOURINARY SYSTEM

Course 10 Coordinator: **Dr. Sharifah Nany Rahayu Karmilla Syed Hassan**
H/P: 0179047095

Dr. Azzahra binti Azhar
H/P: 01115621673

CONTENT SYNOPSIS:

The genitourinary system (GUS) course emphasises the fundamental knowledge of the urinary and the male reproductive systems. The objective of this course is for students to learn the normal structures and functions of the urinary system, mainly the kidney, and organs in the male reproductive system. It also covers the pathology and clinical manifestations of common diseases affecting the systems and related pharmacological treatment. They will also learn basic medical examination and procedures, and communication skills during collaborative learning activities.

The method of teaching and learning includes interactive lectures, e-learning, small group discussion (SGD), problem based learning (PBL), laboratory practical and early clinical exposure (ECE). It incorporates HIEPs through Collaborative Assignments and Projects.

At the end of this course, student should be able to describe the structures and functions of the genitourinary system and correlate them with the disease mechanisms and drug actions. Students should also be able to display related basic medical examinations and procedures as well as effective communication and good teamwork.

COURSE LEARNING OUTCOMES VS PLO/ MQF AND TEACHING DELIVERIES:

After completing this course, the students will be able to:

CLO	Description	PLO	Tax	MQF	Weightage (100%)	Delivery
CLO1	Demonstrate the interrelationship of the structures, functions, disease mechanisms and drug actions in the genitourinary system.	PLO 1	C3	MQF1 - Knowledge and Understanding	75	Interactive lecture, e-learning, PBL, SGD
CLO2	Display basic medical examinations and procedures to identify structures and functions of the urinary system	PLO 3	P3	MQF3a, Practical skill	15	Practical, ECE
CLO3	Demonstrate effective communication during collaborative learning.	PLO 5	A3	MQF3c - Communication Skills	5	PBL, SGD
CLO4	Demonstrate good teamwork during collaborative learning.	PLO 8	A3	MQF3f - Leadership, autonomy and responsibility	5	PBL, SGD

ASSESSMENTS:

CLO1 (C3)	**MQF1: Knowledge and Understanding**	**75 %**	
Category Title	**Tool**	**Examination Format**	**Weight (%)**
Final Exam	MCQ	Final Assessment	30
Final Exam	Structured Essay	Final Assessment	20
Quiz	MCQ	Continuous Assessment	25
CLO2 (P3)	**MQF3a: Practical Skills**	**15 %**	
Category Title	**Tool**	**Examination Format**	**Weight (%)**
Final Exam	OSPE	Final Assessment	10
ECE assessment	Supervisor report	Continuous Assessment	5
CLO3 (A3)	**MQF3c: Communication skills**	**5%**	
Category Title	**Tool**	**Examination Format**	**Weight (%)**
Group work assessment	Supervisor report	Continuous Assessment	5
CLO4 (A3)	**MQF3f:Leadership, autonomy & responsibility**	**5%**	
Category Title	**Tool**	**Examination Format**	**Weight (%)**
Group work assessment	Supervisor report	Continuous Assessment	5

TEACHING AND LEARNING METHODS

Interactive Lecture
E-learning
SGD : Small Group Discussion
PRC : Practical
ECE : Early Clinical Exposure
PPD : Personal and Professional Development
PBL : Problem Based Learning

OUTLINE OF COURSE CONTENT (LECTURES/E-LEARNING)

Lecture	Lecturer	Title	Learning Outcome
Anatomy 1	**NFCL**	**Kidney**	• Describe the location of the kidneys. • Describe the external feature of the kidneys and their relations. • Name the structures passing through their hila. • Describe the blood supply, nerve supply and lymphatic drainage of kidney. • Discuss the clinical application.
Anatomy 2	**YIAB**	**Ureters, urinary bladder, and urethra**	• Describe the course, relations, blood supply and nerve supply of the ureters. • Describe the features, relation, blood supply and nerve supply of the urinary bladder. • Describe the gross anatomy of the urethra and differences between male and female urethrae. • Discuss the clinical application.
Anatomy 3 (E-learning 2 hours)	**YIAB**	**Male reproductive organs**	• Describe the gross anatomy of scrotum, testes, ductus deferens, penis, and accessory sex glands. • Describe the relations of the ductus deferens and prostate gland. • Name the blood supply, nerve supply, and lymphatic drainage of the male reproductive organs. • Discuss the clinical applications.
Anatomy 4 (E-learning 2 hours)	**TFM**	**Histology of genitourinary system**	• Describe the histological features of the kidney, ureters and urinary bladder. • Describe the histological features of the male reproductive system (testes, ductus deferens, epididymis, seminal vesicles, and prostate gland).
Anatomy 5 (E-learning 2 hours)	**YIAB**	**Development of genitourinary system**	• Describe the development of the kidneys, ureters, urinary bladder and urethra. • Name the congenital anomalies of the urinary system. • Describe the development of the male gonads, ductal system, and male external genitalia. • Name the common congenital anomalies of male reproductive system.

Lecture	Lecturer	Title	Learning Outcome
Physiology 1 (E-learning 2 hours)	**SAM**	**Functional structures of the kidney and the renal circulation**	• Describe the physiological functions of the kidney. • Describe the types and structure of the nephron. • Describe the microstructure of the filtration barrier. • Describe the renal circulation and renal blood flow through the nephrons.
Physiology 2	**MAM**	**Glomerular filtration**	• Define glomerular filtration rate (GFR). • Describe the GFR mechanism, principle, and factors. • Describe the measurement of glomerular filtration rate.

Physiology 3 (E-learning 2 hours)	**MAM**	**Renal clearance**	• Define renal clearance.
			• Explain the concept of clearance.
			• Explain the relationship of inulin clearance and GFR.
			• Explain the relationship between clearance and renal handling of the following substances.
			  ◦ glucose
			  ◦ PAH
			  ◦ Creatinine
			• Describe the concept of osmolar clearance, free water clearance and obligatory urine volume.

Physiology 4	**ZAO**	**Proximal tubular transport**	• Describe the physiological function of the proximal tubule. • Explain the secretion and absorption of various substances along the proximal tubule.
Physiology 5 (E-learning 2 hours)	**ZAO**	**Distal tubular transport**	• Describe the physiological function of the distal tubule. • Explain the secretion and absorption of various substances along the distal tubule.
Physiology 6	**MAM**	**Urine concentrating mechanism and tubular**	• Explain the importance of a urine concentrating mechanism. • Describe the counter-current multiplier and exchanger systems. • Explain the role of protein and urea in urine concentrating mechanism. • Describe glucose tubular transport and reabsorption.

		reabsorption of glucose	• Discuss briefly the pathophysiology of diuresis, polyuria, and glycosuria.
Physiology 7	**SAM**	**Renin-angiotensin and aldosterone system**	• Describe the juxtaglomerular apparatus. • Explain the relationship between renin, angiotensin, and aldosterone in long-term regulation of blood volume/pressure. • Identify factors affecting renin secretion. • Relate the role of kidney in the pathophysiology of hypertension.
Physiology 8 (E-learning 2 hours)	**CMN**	**Micturition reflex**	• Describe the functional structures of micturition. • Describe autonomic nerve supply to the urinary bladder and their functions. • Explain the mechanism of bladder filling and evacuation (reflex mechanism). • Describe a cystometrogram. • Describe abnormalities in bladder function.
Physiology 9 (E-learning 2 hours)	**CMN**	**The male reproductive physiology**	• Describe the male reproductive structures. • Describe the spermatogenesis process and its process. • List the endocrine function of the testis. • Describe the functions of testosterone and regulation. • Briefly discuss the diseases related to testis endocrine functions.

Lecture	Lecturer	Title	Learning Outcome
Biochemistry 1 (E-learning 2 hours)	**SNRK**	**Biochemical composition of urine**	• Describe the normal chemical composition of urine. • Explain the urine investigation tests to diagnose diseases.
Biochemistry 2	**LHMA**	**Acid-base regulation**	• State the normal pH of a healthy adult and list the mechanisms in acid-base regulation. • Discuss the role of kidneys in pH homeostasis.
Biochemistry 3	**SMAR**	**Acid-base abnormalities**	• List the FOUR (4) types of acid-base disorders. • Describe the causes of acid-base disorders. • Discuss the renal compensatory mechanisms for acidosis and alkalosis of metabolic and respiratory origin. • Interpret arterial blood gas laboratory report.
Biochemistry 4	**SMAR**	**Fluid and electrolytes balance**	• Explain the regulation and mechanisms involved in the maintenance of normal fluid and electrolytes balance. • Define hyponatraemia, pseudohyponatraemia and hypernatraemia. • Define hypokalaemia and hyperkalaemia.
Biochemistry 5	**SMAR**	**Renal failure**	Define renal failure. List the types of renal failure Discuss the clinical manifestation of renal failure Outline the treatment of renal failure

Lecture	Lecturer	Title	Learning Outcome
Microbiology	**KAJ**	**Urinary tract infection**	● Define urinary tract infection. ● Describe the epidemiology, clinical findings, pathogenesis, and complications ● List the causative organisms. ● Explain the laboratory investigation. ● Outline the management and prevention of the infection.

Lecture	Lecturer	Title	Learning Outcome
Pathology 1	**AA**	**Renal and bladder carcinoma**	• Identify gross and microscopic pictures of renal carcinoma. • Describe their characteristic morphological features of renal carcinoma. • Correlate the clinic pathological features of renal cell carcinoma. • Identify gross and microscopic pictures of bladder carcinoma. • Correlate the clinic pathological features of renal cell carcinoma
Pathology 2	**NHAB**	**Glomerular diseases**	• Classify the causes of glomerulonephritis and nephrotic syndrome • Describe the pathogenesis of glomerulonephritis and nephrotic syndrome • Describe the pathological (gross and microscopic) and immunological changes in the kidney • Correlate the immunological changes to the clinical features of glomerular disease • Outline the methods in the diagnosis of glomerular diseases (histopathological diagnosis, immunofluorescence study, electron microscopy)
Pathology 3	**NHAB**	**Benign prostatic hyperplasia**	• Outline the types of prostatic inflammations. • Define benign prostatic hyperplasia • Describe the aetiology, pathogenesis, gross, and microscopic features and complications of BPH.
Pathology 4	**NHAB**	**Prostate cancer**	• Describe the aetiology, pathogenesis, morphological, clinical features, and complications of prostate cancer. • Explain the grading and staging of prostate cancer.
Pathology 5 (E-learning 2 hours)	**AA**	**Diseases of male reproductive organs**	• Describe the diseases of penis, testis and epididymis and identify the causes. • Describe the pathogenesis of ca penis. • Explain briefly the morphology and histopathology of penile cancer. • Describe aetiology, pathogenesis, and morphological features of testicular tumours. • Clinical significance and management outline of cancer of male reproductive organ.
Pathology 6	**NHAB**	**Renal stones**	• Describe the classification, epidemiology, frequency of occurrence, predisposing factors, and pathogenesis of renal stones.

(E-learning 2 hours)			• Describe the pathological changes associated with renal stones • Outline the clinical effects of renal stones • Outline the diagnosis/ investigation of renal stones • Describe the classification of haematuria.
Pathology 7	**AA**	**Neurogenic bladder**	• Definition of neurogenic bladder. • Discuss the aetiology and pathogenesis of neurogenic bladder. • Explain the classification of neurogenic bladder. • Describe morphology and clinical significance. • Outline the investigation and management of neurogenic bladder.

Lecture	Lecturer	Title	Learning Outcome
Pharmacology 1	**MSAA**	**Drugs and kidneys**	• Explain the mechanisms of renal drug excretion. • Describe the mechanisms of drug-induced nephrotoxicity (pre-renal, renal & post-renal).
Pharmacology 2 (E-learning 2 hours)	**SYNJ**	**Diuretics**	• Describe the renal transport mechanisms and how diuretics affect the renal excretion of electrolytes. • Classify diuretics according to their sites/mechanisms of action. • Relate the mechanism of action of diuretic groups to the clinical conditions to which they are indicated. • Describe the relevant pharmacokinetics, the major adverse effects and other therapeutic uses of diuretics.
Pharmacology 3	**SDA**	**Drugs used in urinary tract infection and agents of voiding**	• Understand concept of treatment of infection of the urinary systems. • Describe drugs available to reduce infections, their mechanism of action and common side effects. • Discuss the rationale of combination therapy for urinary tract infection (UTI). • Describe the important drugs used in voiding.

Lecture	Lecturer	Title	Learning Outcome
CLINICAL			
CLINICAL / INTERNAL MEDICINE 1	**AM**	**Common symptomatology in GUS (Dysuria / haematuria**	• Describe the clinical approach to dysuria. • Briefly discuss the principle of management for dysuria. • Describe the clinical approach to haematuria. • Briefly discuss the principle of management for haematuria.
CLINICAL / INTERNAL MEDICINE 2	**NH**	**Common symptomatology in GUS (Anuria / oedema)**	• Describe the clinical approach to anuria. • Briefly discuss the principle of management for anuria. • Describe the clinical approach oedema. • Briefly discuss the principle of management for oedema.
RADIOLOGY			
Radiology	**HMAR**	**Radiological anatomy of urinary system**	• Describe the normal radiographic anatomy of genitourinary tract on KUB x-ray, CT KUB, us KUB, IVU, MCU and urethrogram.

OUTLINE OF COURSE CONTENT (PBL, SGD, PRACTICAL, ECE & PPD)

PBL	Lecturer	Title	Learning Outcome
PBL Case 1	**NB, SMAR, NAS, LHMA, KAJ, SHN**	**Case 1**	● Apply basic sciences knowledge to clinical scenario. ● Demonstrate effective communication and good teamwork. ● Specific LO to be declared in session 1 of PBL.
PBL Case 2	**SMAR, SNRK, NFCL, NAS, NHAB, SYNJ**	**Case 2**	● Apply basic sciences knowledge to clinical scenario. ● Demonstrate effective communication and good teamwork. ● Specific LO to be declared in session 1 of PBL.
PBL Case 3	**NAAB, SIS, SFMA, SDA, NFMN, TFM**	**Case 3**	● Apply basic sciences knowledge to clinical scenario. ● Demonstrate effective communication and good teamwork. ● Specific LO to be declared in session 1 of PBL.

SGD	Lecturer	Title	Learning Outcome
SGD Anatomy	**TFM, NFCL, YIAB, SFMA**	**Applied Anatomy of genitourinary system**	● Apply basic sciences knowledge to clinical scenarios in genitourinary system. ● Demonstrate effective communication and good teamwork.
SGD Physiology 1	**MAM, NAAB, NAS, ZAO**	**Diabetes Insipidus**	● Apply basic sciences knowledge to clinical scenario. ● Demonstrate effective communication and good teamwork.
SGD Physiology 2	**ZAO, CMN, SAM, MAM**	**Regulation of volume and osmolarity/ RAAS system**	● Apply basic sciences knowledge to clinical scenario. ● Demonstrate effective communication and good teamwork.
SGD Biochemistry	**SMAR, USMR, SNRK, LHMA**	**Metabolic acidosis and alkalosis**	● Apply basic sciences knowledge to clinical scenario. ● Demonstrate effective communication and good teamwork.
SGD Pathology	**NHAB, AA,MA**	**To be decided by unit**	● Apply basic sciences knowledge to clinical scenario. ● Demonstrate effective communication and good teamwork.
SGD Pharmacology	**All Pharmacology Lecturers**	**To be decided by unit**	● Apply basic sciences knowledge to clinical scenario. ● Demonstrate effective communication and good teamwork.

PRACTICAL	Lecturer	Title	Learning Outcome
Practical Anatomy	**NFCL, YIAB**	**Gross anatomy of the genitourinary system** **Lab staff:** Faizzul, Faradi, Khairul Nizam, Rostamizi	● Demonstrate the gross anatomical features and relations of the kidney, ureters, and urinary bladder. ● Identify anatomical features of the male reproductive organs. ● Differentiate between male and female urethrae.
Practical Histology	**TFM**	**Histology of genitourinary system** **Lab staff:** Rodziah, Khairul Nizam	● Identify the histological features the kidney, ureter, and urinary bladder. ● Identify the histological features of male reproductive organs (testes, ductus deferens, epididymis, and prostate gland.
Practical Microbiology	**KAJ**	**Laboratory Diagnosis of Urinary Tract Infections** **Lab staff:** Faizzul, Azlina, Tajul	● Explain the procedure for sample collection, processing and reporting of results of urine specimens. ● Interpret the laboratory result of urine specimens. ● Identify the causative organisms of urinary tract infections ● Describe the microscopic appearance and colony. morphology of the causative organisms
Practical Pathology	**NHAB, AA**	**Pathology of genitourinary system** **Lab staff:** Shahril, Azuan	● Identify the pathological features of different types of glomerulonephritis and correlate with clinical manifestation. ● Identify the pathological features of renal stones. ● Identify the pathological features of common urinary tract tumours. ● Identify the pathological features of common benign and malignant disease of male reproductive organs.
Practical Biochemistry	**SNRK**	**Urinalysis**	● Elaborate on the procedure for urinalysis. ● Describe the full examination, microscopic examination (FEME) test. ● Interpret the reading and relate with possible diseases.

ECE	Lecturer	Title	Learning Outcome
ECE 1	**AA, SMAR, TFM, SFMA**	**Common symptoms in urinary system**	● Perform basic history taking for common symptoms in urinary system disease - Dysuria - Haematuria - Loin pain - ESRF symptoms
PPD	**Lecturer**	**Title**	**Learning Outcome**
PPD 1	**Prof Harmy**	**ENTREPRENEURIAL OPPORTUNITY IN MEDICINE**	● Be able to describe different types of opportunities in healthcare industry. ● Understand the link between meeting human needs and entrepreneurial opportunity ● Understand why people identify some opportunities but not others ● Appreciate that some innovations and opportunities have more commercial potential (are more attractive) than others.
PPD 2	**Prof Harmy**	**ORGANISATION IN HEALTH CARE BUSINESS**	What is strategy and organisation objectives? Definition of management and managers in organisation. ● Process of management

***Note: E-Learning sessions will start on Session 2023/2024.**

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Anatomy

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Physiology

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Biochemistry

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2. Rodwell VW, Kennelly PJ, Weil PA, Bender DA and Botham KM: Harper's Illustrated Biochemistry, 2018. McGraw-Hill Education _ Medical, 31st Edition.
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2. Rubin, E., Reisner, H.M. (2019). Essentials of Rubin's Pathology. 7th edition. Philadelphia. Lippincott Williams & Wilkins
3. Rubin, R. Strayer, D.S., Rubin, E. (2020). Rubin's Pathology: Clinicopathologic Foundations of Medicine. 8th edition. Philadelphia. Lippincott Williams & Wilkins

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1. Katzung B, Trevor A. (2020). Basic and Clinical Pharmacology. 15th edition. McGraw-Hill Education.
2. Rang HP, Ritter JM, Flower RJ, Henderson G. (2019). Rang & Dale's Pharmacology, 9th edition. Elsevier Churchill-Livingstone.
3. Whalen, K. (2022). Lippincott Illustrated Reviews: Pharmacology. 7th edition. Wolter Kluwer Lippincott Williams Wilkins.

PPD

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2. Kosslyn, Robin (2019), Fundamentals of Psychology in Context, 3rd edition, Pearson Education.

ECE

1. Talley NJ and O'Connor S. Clinical examination: a systematic guide to physical diagnosis. 6th edn. 2010, Elsevier Australia.
2. Murtagh J, Rosenblatt JV, Coleman J, and Murtagh C. John Murtagh's General Practice. 7th edn. 2018, McGraw-Hill Education.
3. Innes JA, Dover A and Fairhurst K (2018): Macleod's Clinical Examination.14th Edition, Elsevier.

BACHELOR OF MEDICINE & BACHELOR OF SURGERY (MBBS) PROGRAMME PHASE 1
(SEMESTER 4, YEAR 2)
Academic Session 2023/2024

WEEK 1	COURSE 10: Genitourinary System	Course Coordinator: Dr. Sharifah Nany Rahayu Karmilla

TIME DATE	8.30 – 9.30	9.30 – 10.30	11.00 - 12.00	12.00 – 1.00	2.30 – 3.30	3.30 – 4.30	4.30-5.30
SUNDAY **21.04.2024**	**SELF-STUDY**	Introduction to course **AA** (online)	Male Reproductive Organs **YIAB** (e-learning)		Kidney **NFCL** DKA	Ureters, Urinary Bladder, and Urethra **YIAB** DKA	**SELF-STUDY**
MONDAY **22.04.2024**	SOTL **SYNJ** Computer lab 1&3		Development of Genitourinary System **YIAB** (e-learning)		Histology of Genitourinary System **TFM** (e-learning)		**SELF-STUDY**
TUESDAY **23.04.2024**	Functional Structures of Kidney and Renal Circulation **SAM** (e-learning)		Glomerular Filtration **MAM** DKA	Urine Concentrating Mechanism and tubular reabsorption of glucose **MAM** DKA	Distal Tubular Transport **ZAO** (e-learning)		**SELF-STUDY**
WEDNESDAY **24.04.2024**	**PPD: KEM MERANG**						
THURSDAY **25.04.2024**	**PPD: KEM MERANG**						

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WEEK 2

COURSE 10: Genitourinary System

Course Coordinator:
Dr. Sharifah Nany Rahayu Karmilla

TIME DATE	8.30 – 9.30	9.30 – 10.30	11.00 - 12.00	12.00 – 1.00	2.30 – 3.30	3.30 – 4.30	4.30-5.30
SUNDAY **28.04.2024**	PBL Case 1 Session 1 **NB, SMAR, NAS, LHMA, KAJ, SHN** BT1, BT2, BT3, BT4, BT5, BT6		**Anatomy Practical:** Gross Anatomy of Genitourinary System **NFCL, YIAB** Faizzul, Faradi, Rostamizi, Khairul Makmal Diseksi Anatomi 1&2		Renal Clearance **MAM** (e-learning)		**SELF-STUDY**
MONDAY **29.04.2024**	Proximal Tubular Transport **ZAO** DKA	Renin-Angiotensin Aldosterone System **SAM** DKA	**Histology Practical:** Histology of Genitourinary System **TFM** Rodziah, Azuan MPG1-3 (Mmikrob/mbiokim/mhisto)		Micturition Reflex **CMN** (e-learning)		**SELF-STUDY**
TUESDAY **30.04.2024**	**SGD Anatomy:** Applied Anatomy **TFM, NFCL, YIAB, SFMA** DKA, DKC, MKK2,DT	Urinary Tract Infection **KAJ** DKA	**SELF-STUDY**	Renal Failure **SMAR** DKA	PBL Case 1 Session 2 **NB, SMAR, NAS, LHMA, KAJ, SHN** BT1, BT2, BT3, BT4, BT5, BT6		**SELF-STUDY**
WEDNESDAY **01.05.2024**	**LABOUR DAY**						
THURSDAY **02.05.2024**	**SELF-STUDY**		**SELF-STUDY**		**SELF-STUDY**		

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WEEK 3	COURSE 10: Genitourinary System	Course Coordinator: Dr. Sharifah Nany Rahayu Karmilla

TIME DATE	8.30 – 9.30	9.30 – 10.30	11.00 - 12.00	12.00 – 1.00	2.30 – 3.30	3.30 – 4.30	4.30-5.30
SUNDAY **05.05.2024**	PBL Case 2 Session 1 **SMAR, SNRK, NFCL, NAS, NHAB, SYNJ** BT1, BT2, BT3, BT4, BT5, BT6		Male Reproductive **CMN** (e-learning)		Biochemical Composition of Urine **SNRK** (e-learning) DKA		**SELF-STUDY**
MONDAY **06.05.2024**	Acid-Base Regulation **LHMA** DKA	Acid-Base Abnormalities **SMAR** DKA	**Microbiology Practical:** Laboratory Analysis of Urinary Tract Infections **KAJ** Faizzul, Azlina, Tajul MPG1-3 (Mmikrob/mbiokim/mhisto)		**SGD Physiology 1:** Diabetes Insipidus **MAM, NAAB, NAS, ZAO** (4 Groups) BT 1,2,3,4	Prostate Cancer **NHAB** DKA	**SELF-STUDY**
TUESDAY **07.05.2024**	Fluid and Electrolyte Balance **SMAR** DKA	**Radiology:** Radiological Anatomy of Genitourinary System **HMAR** DKA	**SGD Biochemistry:** Metabolic Acidosis and Alkalosis **SMAR ,USMR, SNRK, LHMA** BT 1,2,3,4	Clinical 1 Common symptomatology in GUS (dysuria/haematuria) **AM** DKA	**SGD Physiology 2:** RAAS system **ZAO, CMN SAM, MAM** (4 Groups) BT 1,2,3,4	**SELF-STUDY**	
WEDNESDAY **08.05.2024**	PBL Case 2 Session 2 **SMAR, SNRK, NFCL, NAS, NHAB, SYNJ** BT1, BT2, BT3, BT4, BT5, BT6		Clinical 2 Common symptomatology in GUS (anuria/oedema) **NH** DKA	Renal and Bladder Carcinoma **AA** DKA	**Bahasa Arab Kebangsaan** **2 pm-4 pm**		**SELF-STUDY**
THURSDAY **09.05.2024**	Disease of Male Reproductive Organs **AA** (e-learning)		**Biochemistry Practical:** Urinalysis **SNRK** Faizzul, Ummi, Azlida, Azuan MPG1-3 (Mmikrob/mbiokim/mhisto)		**SELF-STUDY**		

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WEEK 4	COURSE 10: Genitourinary System	Course Coordinator: Dr. Sharifah Nany Rahayu Karmilla

TIME / DATE	8.30 – 9.30	9.30 – 10.30	11.00 - 12.00	12.00 – 1.00	2.30 – 3.30	3.30 – 4.30	4.30-5.30
SUNDAY **12.05.2024**	Renal Stones **NHAB** (e-learning)		PBL Case 3 Session 1 **NAAB, SIS, SFMA, SDA, NFMN, TFM** BT1, BT2, BT3, BT4, BT5, BT6		Neurogenic Bladder **AA** DKA	**SELF-STUDY**	
MONDAY **13.05.2024**	Glomerular Disease **NHAB** DKA	Benign Prostatic Hyperplasia **NHAB** DKA	**Pathology Practical**: Pathology of Genitourinary System **NHAB, AA** Syahril, Faradi MPG1-3 (Mmikrob/mbiokim/mhisto)		Diuretics **SYNJ** (e-learning)		**SELF-STUDY**
TUESDAY **14.05.2024**	Drugs and Kidneys **MSAA** DKA	Drugs Used in UTI and Agents of Voiding **SDA** DKA	**ECE** History Taking **AA, SMAR, TFM, SFMA** MKK1, MKK2, MKK3		**SGD Pharmacology:** **Pharmacology Lecturers** BT 1,2,3,4	**SELF-STUDY**	
WEDNESDAY **15.05.2024**	**PPD 1:** ENTREPRENEURIAL OPPORTUNITY IN MEDICINE **Prof Harmy** DKA	**PPD2:** ORGANISATION IN HEALTH CARE BUSINESS **Prof Harmy** DKA	**SELF-STUDY**		**Bahasa Arab Kebangsaan** **2-4pm**		**SELF-STUDY**
THURSDAY **16.05.2024**	**PPD: TAMAN SINAR HARAPAN**						

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WEEK 5	COURSE 10: Genitourinary System					Course Coordinator: Dr. Sharifah Nany Rahayu Karmilla		
TIME / DATE	**8.30 – 9.30**	**9.30 – 10.30**	**11.00 - 12.00**	**12.00 – 1.00**	**2.30 – 3.30**	**3.30 – 4.30**	**4.30-5.30**
SUNDAY 19.05.2024	PBL Case 3 Session 2 **NAAB, SIS, SFMA, SDA, NFMN, TFM** BT1, BT2, BT3, BT4, BT5, BT6		**SGD Pathology:** **Pathology Lecturers** DKA, DKB, DKC	**SELF-STUDY**	**ECE** Physical Examination **AA, SMAR, TFM, SFMA** MKK1, MKK2, MKK3		
MONDAY 20.05.2024	**ONLINE QUIZ** **Anatomy + Physiology** **Makmal Komputer 1 & 3**		**SELF-STUDY**		**SELF-STUDY**		
TUESDAY 21.05.2024	**ONLINE QUIZ** **Biochemistry + Pathology + Pharmacology** **Makmal Komputer 1 & 3**		**Feedback/Review Session** DKA	**Meeting PreClinical School (online)** DKA	**SELF-STUDY**		
WEDNESDAY 22.05.2024	**WESAK DAY**						
THURSDAY 23.05.2024	**SELF-STUDY**		**SELF-STUDY**		**SELF-STUDY**		

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MEDICAL CAMPUS, JALAN SULTAN MAHMUD
20400 KUALA TERENGGANU