

RBVRR Women's College of Pharmacy (Approved by AICTE & PCI, Affiliated to Osmania University) Barkatpura, Hyderabad – 500 027.

SCHEDULE OF INSTRUCTIONS

COURSE PLAN

Academic year: 2023 -2024

Name of the program: pharmd

Year: II

Name of the subject: Pharmaceutical microbiology

Course/subject code: 2.2

Name of the faculty: P.APARNA

Designation: Assistant professor

Department: Pharmaceutics

Text books referred:

T1: Text book of microbiology by Pelezair and Reid

T2: Text book of microbiology by Ananthanarayan and Paniker

T3: Text book of microbiology by P Chakraborty

T4: Text book of microbiology by Arora

T5: Pharmaceutical microbiology by S.S.Purohit, A.K. Saluja and H.N.Kakrani

Unit no.	Les son no.	Date	No. Of peri ods	Name of the topic	Mode of teaching	Po/co	Ict tool used	link
1	1.	30/10 /23	1	Introduction to microbiology syllabus.	Chalk and board	1,4,8,11/1		
	2.	1/11/ 23	1	Introduction ,branches of microbiology ,scopes of microbiology	Chalk and board	1,4,8,11/1		
	3.	4/11/ 23	1	History of microbiology discovery era,	Chalk and board	1,4,8,11/1		
	4.	8/11/ 23	1	transition eraGolden era	Chalk and board	1,4,8,11/1		
	5.	14/11 /23	1	Golden era,kochs postulates contribution of various scientists	Chalk and board	1,4,8,11/1		
	6.	14/11 /23	1	Modern era Modern development in microbiology	Chalk and board	1,4,8,11/1		
	7.	15/11 /23	1	Major division of microorganisms differences between prokaryotes & eukaryotes	Chalk and board	1,4,8,11/1		
2	8.	20/11 /23	1	,Classification of microorganisms, characteristics,need,methods of classification2 kingdom,3 kingdom whittakers classification carlwose classification.	Chalk and board	1,8,11/2		
	9.	21/11 /23	1	Study of bacteria	Chalk and board	1,8,11/2		
	10.	22/11 /23	1	Bacterial cellBacterial cell ,Types of flagella ,pilli,fimbrae andclassification	Chalk and board	1,8,11/2		
	11.	18/11 /23	1	Tutorial hr	Chalk and board	1,8,11/2		
	12.	28/11 /23	1	Cell wall ultra structure of gram positive,gram negative difference	Chalk and board	1,8,11/2		
	13.	4/12/ 23	2	Tutorial hr test	Chalk and board	1,8,11/2		
	14.	5/12/ 23	1	Endospores,cysts sporulation,differences of gram positive and gram negative.	Chalk and board	1,8,11/2		

3	15.	6/12/23	1	Classification of bacteria, Nutritional requirement of bacteria	Chalk and board	1,8,11/2		
	16.	11/12/23	1	Functional categories of media with example	Chalk and board	1,8,11/2		
	17.	18/12/23	1	Factors effecting growth, growth curve, Continuous and synchronous growth.	Chalk and board	1,8,11/2		
	18.	19/12/23	1	Types of culture media factors	Chalk and board	1,8,11/2		
2	19.	20/12/23	1	Reproduction of bacteria, preservation and maintenance of lab culture.	Chalk and board	1,8,11/2		
	20.	23/12/23	1	Virus classification, general characteristics.	Chalk and board	1,8,11/2		
	21.	27/12/23	1	Viral replication: lytic, isogenic cycle	Chalk and board	1,8,11/2		
	22.	29/12/23	1	Viral replication	Chalk and board	1,8,11/2		
	23.	30/12/23	1	Viral cultivation and detection	Chalk and board	1,8,11/2		
	24.	20/1/24	1	Fungi, Lower fungi classification characteristics	Chalk and board	1,8,11/2		
	25.	22/1/24	1	Terrestrial fungi cultivation of fungi, importance	Chalk and board	1,8,11/2		
	26.	23/1/24	1	Spirochetes, rickettsiae classification, characteristic	Chalk and board	1,8,11/2		
4	27.	21/1/24	1	Different methods used in isolation of bacteria	Chalk and board	1,8,11/2		
	28.	22/1/24	1	Cultivation of bacteria	Chalk and board	1,8,11/2		
	29.	29/1/24	1	Isolation: streak plate, spread, pour plate method	Chalk and board	12,3,4,8,1/3		
	30.	30/1/24	1	Staining methods: gram staining, acid fast staining, flagellar staining	Chalk and board	12,3,4,8,1/3		
	31.	31/1/23	1	Capsule, negative staining, endospore staining methods.	Chalk and board	12,3,4,8,1/3		
	32.	3/2/24	1	Tutorial hr	Chalk and board	12,3,4,8,1/3		
	33.	5/2/24	1	Biochemical tests: imvic test, catalase tests.	Chalk and board	12,3,4,8,1/3		
	34.	6/2/24	1	Enumeration methods of bacteria	Chalk and board	12,3,4,8,1/3		
5	35.	7/2/24	1	Sterilization, methods classification dry heat sterilization	Chalk and board	12,3,4,8,1/3		
	36.	10/2/24	1	Moist heat sterilization	Chalk and board	12,3,4,8,1/3		
	37.	12/2/24	1	Filtration radiation type sterilization methods	Chalk and board	12,3,4,8,1/3		
	38.	13/12/24	1	Sterility testing of parenteral preparations	Chalk and board	1,2,4,8,11/3		

	39.	14/2/24	1	Sterility testing of parenteral preparations	Chalk and board	1,2,4,8,11/3		
	40.	19/2/24	1	tutorial	Chalk and board	1,2,4,8,11/3		
	41.	20/2/24	1	Validation ,def,types method of validation	Chalk and board	1,2,4,8,11/3		
6	42.	21/2/224	1	Study of disinfectants	Chalk and board	1,2,4,8,11/3		
	43.	24/2/24	1	Classification ,mode of action of each class	Chalk and board	1,2,4,8,11/3		
	44.	26/2/24	1	Bactericidal bactriostatic effect evaluation	Chalk and board	1,2,4,8,11/3		
	45.	27/2/24	1	Fungicidal &virucidal evualation of disinfectant:phenol coefficient,radial walker test	Chalk and board	1,2,4,8,11/3		
	46.	2/3/24	1	Evaluation of disinfectant: skyes test, disc diffusion test,e- test.	Chalk and board	1,2,4,8,11/3		
	47.	4/3/24	1	Evaluation of disinfectants:Antimicrobial preservative evaluation	Chalk and board	1,2,4,8,11/3		
	48.	6/3/24	1	Annual day	Chalk and board	1,2,4,8,11/3		
7.	49.	13/3/24	1	Immunity, Definition, Classification, General principles of natural immunity, Mechanism of innate components of innate immunity	Chalk and board	1,2,4,8,11/3		
	50.	16/3/24	1	Tutorial hr:Evaluation of disinfectants:Antimicrobial preservative evaluation	Chalk and board	1,2,4,8,11/3		
	51.	18/3/24	1	Phagocytosis, acquired immunity(active and passive) differences. Mechanisms.	Chalk and board	1,2,3,4,10,11/4		
	52.	19/3/24	1	Antigens, chemical nature of antigens structure ,factors affecting immunity	Chalk and board	1,2,3,4,10,11/4		
	53.	19/3/24	1	Antibodies: structureand types	Chalk and board	1,2,3,4,10,11/4		
	54.	20/3/24	1	Antibodies: structureand types functions.	Chalk and board	1,2,3,4,10,11/4		
	55.	23/3/24	1	Formation of antibodies	Chalk and board	1,2,3,4,10,11/4		
	56.	26/3/24	1	Antigen -antibody reactions : classification ,characteristics	Chalk and board	1,2,3,4,10,11/4		
	57.	27/3/24	1	Precipitations reactions types	Chalk and board	1,2,3,4,10,11/4		
	58.	15/4/24	1	Cell mediated immunity,	Chalk and board	1,2,3,4,10,11/4		
	59.	20/4/24	1	Humoral mediated immunity,	Chalk and board	1,2,3,4,8,11/5		

	60.	22/4/24	1	Structure and function of immune system	Chalk and board	1,2,3,4,8,11/5		
	61.	23/4/24	1	Agglutination reactions types examples,application.	Chalk and board	1,2,3,4,8,11/5		
	62.	27/4/24	1	Complement fixation test	Chalk and board	1,2,3,4,8,11/5		
	63.	29/4/24	1	Neutralization reaction:types .complement system	Chalk and board	1,2,3,4,6,8,11/6		
	64.	30/4/24	1	Exotoxins,endotoxins ,differences ,toxoids types.	Chalk and board	1,2,3,4,6,8,11/6		
8.	65.	1/5/24	1	Scicks test,elisa test Elisa- types principles ,applications.	Chalk and board	1,2,3,4,6,8,11/6		
	66.	6/5/24	1	Mantoux ,Peripheral smear test principle procedure.Study of malarial parasite.	ppt	1,2,3,4,6,8,11/6		
	67.	7/5/24	1	Western Blot test, Southern Blot PCR tests ,procedure.	ppt	1,2,3,4,6,8,11/6	active learning	https://drive.google.com/file/d/1EA1C2D10dQX86Sj6RoyYHCnxuWfqKfvE/view?usp=sharing
	68.	8/5/24	1	Widal, QBC,	ppt	1,2,3,4,6,8,11/6		https://drive.google.com/file/d/1EA1C2D10dQX86Sj6RoyYHCnxuWfqKfvE/view?usp=sharing
7.	69.	14/5/24	1	Immune response:primary ,secondary.	ppt	1,2,3,4,6,8,11/6	active learning	https://drive.google.com/file/d/1L50rMvpaRuwA2XvWM19EdDGrOw2JbhoL/view?usp=sharing
	70.	15/5/24	1	Immunization progmmme,importance of booster dose	ppt	1,2,3,4,6,8,11/6	active learning	https://drive.google.com/file/d/1

								L50rMv paRuw A2Xv WM19 EdDGr Ow2Jbh oL/view ?usp=sh aring
9.	71.	7/6/24	1	Culture sensitivity tests: disc diffusion, tube dilution methods mic , mbc determination.	Chalk and board	1,2,3,4, 6,8,11/6		
	72.	10/6/24	1	Principles and methods of different microbiological assays	ppt	1,2,3,4, 6,8,11/6	Ppt active learning	https://drive.google.com/file/d/10F8LDhGCXNdCmwUrtPoXlQqjD57e1Ep/view?usp=sharing
	73.	11/6/24	1	Design of antibiotic assays	Chalk and board	1,2,3,4, 6,8,11/6	Ppt active learning	https://drive.google.com/file/d/10F8LDhGCXNdCmwUrtPoXlQqjD57e1Ep/view?usp=sharing
	74.	12/6/24	1	Assay of streptomycin and penicillin.	Chalk and board	1,2,3,4, 6,8,11/6	ppt	https://drive.google.com/file/d/10F8LDhGCXNdCmwUrtPoXlQqjD57e1Ep/view?usp=sharing
	75.	15/6/24	1	Assay of vitamins.	Chalk and board	1,2,3,4, 6,8,11/6	ppt	https://drive.google.com/file/d/10F8LDhGCXNdCmwUrtPoXlQqjD57e1Ep/view?usp=sharing
	76.	19/6/24	1	Standardization of vitamins and sera	Chalk and board	1,3,6,8, 11/7		
10	77.	22/6/24	1	Pathogenicity and infection	Chalk and board	1,3,6,8, 11/7		
	78.	24/6/24	1	Typoid study: pathogenesis, symptoms, lab diagnosis, treatment., immunoprophylaxis. fever	Chalk and board	1,3,6,8, 11/7		
	79.	25/6/27	1	Typhoid fever revision	Chalk and board	1,3,6,8,		

						11/7		
80.	26/6/24	1	cholera study:pathogenesis,symptoms,lab diagnosis, treatment.,immunoprophylaxis	Chalk and board		1,3,6,8,11/7		
81.	27/6/24	1	t.b study:pathogenesis,symptoms,lab diagnosis, treatment.,immunoprophylaxis	Chalk and board		1,3,6,8,11/7		
82.	30/6/24	1	Malaria: study:pathogenesis,symptoms,lab diagnosis, treatment.,	Chalk and board		1,3,6,8,11/7		
83.	1/7/24	1	Meningitis,gonorrhoea study:pathogenesis,symptoms,lab diagnosis, treatment.,	Chalk and board		1,3,6,8,11/7		
84.	2/7/24	1	Study of malarial parasite lycle cycle study:pathogenesis,symptoms,lab diagnosis, treatment.,	Chalk and board		1,3,6,8,11/7		
85.	3/7/24	1	Syphilis:pathogenesis,symptoms,lab diagnosis, treatment.	Chalk and board		1,3,6,8,11/7		
86.	6/7/24	1	Hepatitis morphology types ,symptomms ,diagnosis ,treatment.	ppt		1,4,11/7		https://drive.google.com/file/d/1liDziSxl0BVDxku5RX9ek8KwPAZvgNpL/view?usp=sharing
87.	8/7/24	1	Western blotting.pcr revision test .	Chalk and board		1,4,11/7		
88.	9/7/24	1	Tutorial hr	Chalk and board		1,2,3,4,6,8,11/6		
89.	10/7/24	1	Aids :pathogenesis,symptoms,lab diagnosis, treatment.	Chalk and board		1,2,3,4,6,8,11/6		
90.	16/7/24	1	Tutorial hr : diagnostic tests revision	Chalk and board		1,4,11/7		
91.	20/7/24	1	Aids :pathogenesis,symptoms,lab diagnosis, treatment.	Chalk and board		1,4,11/8		

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Barkatpura, Hyderabad – 500 027.

SCHEDULE OF INSTRUCTIONS

		COURSE PLAN			
Academic year: 2023-2024					
Name of the program: B. PHARMACY				Year: II/I (SECTION-A)	
Name of the subject: PHARMACEUTICAL ENGINEERING				Subject code: BP 304 T	
Name of the faculty: P.APARNA				Designation: ASSISTANT PROFESSOR	
Department: PHARMACEUTICS					
Text books referred:					

T₁: Pharmaceutical Unit operations Vol-1, Vol-2, by CVS Subrahmanyam

T₂: Pharmaceutical Engineering by K. Samba Murthy

T₃: Pharmaceutical Engineering by Dr. Ananath Paradkar

T₄: Tutorial pharmacy by Carter

T₅: chemical engineering by Badger.

T₆: Theory and practice of industrial pharmacy by Leon Lachman

Un it No	Less on No	Dates	No. Of Perio ds	Name Of The Topic	Mode of teachin g	PO/CO	LINKS	Type of activity
I	1	15/11/ 23	1	Unit operations and unit process	Smart board	1,2,4/1		
	2	16/11/ 23	1	Fluid statics, Flow of fluids ,manometers	Smart board	1,2,4/1		

	3	17/11/23	1	simple manometer. Types of manometers, construction, working applications advantages Reynolds number, types of flow.	Smart board	1,2,4/1		
	4	18/11/23	1	Bernoulli's theorem and its applications,	Smart board	1,2,4/1		
	5	23/11/23	1	Energy losses ,Orifice meter, Venturimeter construction, working	Smart board	1,2,4/1		
	6	23/11/23	1	Application of Rota meter ,pitot tube ,revision	Smart board	1,2,4/1		
	7	24/11/23	1	Size reduction, objectives, material properties	Smart board	1,2,4/1		
	8	25/11/23	1	Tutorial class	Smart board	1,2,4/1		
	9	29/11/23	1	Mechanism of size reduction, Theory of size reduction, factors affecting size reduction and hammer mill	Smart board	1,2,4/1		
	10	1/12/23	1	Ball mill, fluid energy mill construction, advantages ,disadvantage	Smart board	1,2,4,9/1	https://www.youtube.com/watch?v=L6sgGXXYdEU	ACTIVE LEARNING

	11	5/12/23	1	edge runner and end runner mill construction, working applications advantages	Smart board	1,2,4,9/1		
	12	7/12/23	1	Factors affecting size reduction, size separation applications	Smart board	1,2,4,9/1		
	13	7/12/23	1	, sieves ,types official powder classification	Smart board	1,2,4,10/1		
	14	8/12/23	1	Mechanism, SIEVE SHAKER equipment sieve analysis frequency distribution plot.	Smart board	1,2,4,10/1		
	15	13/12/23	1	fluid classification systems, bag filter, cyclone separator	Smart board	1,2,4,10/1	https://www.youtube.com/watch?v=XI8Y2S7MW28	ACTIVE LEARNING
	16	14/12/23	1	Air separator, elutriation sedimentation, principles ,applications	Smart board	1,2,4,10/1		
II	17	14/12/23	1	Heat transfer- introduction applications, mechanisms, fouriers law	Smart board	1,2,4,10/1		
	18	15/12/23	1	conduction through metal cylinder, compound resistance in series	Smart board	1,2,3,9,10,11/2		
	19	16/12/23	1	heat transfer by convection, parallel and counter flow	Smart board	1,2,3,9,10,11/2		
	20	20/12/23	1	heat exchangers construction, working applications advantages	Smart board	1,2,3,9,10,11/2	https://www.youtube.com/watch?v=8rGLrhVeZvw	ACTIVE LEARNING
	21	22/12/23	1	heat interchangers construction, working	Smart board	1,2,3,9,10,11/2		

				applications advantages, radiation, grey body, black body.				
	22	23/12/ 23	1	Evaporators – introduction, , short tube, long tube, factors influencing evaporation Classification, pan, film evaporators construction, working applications advantages	Smart board	1,2,3,9, 10,11/2		
	23	28/12/ 23	1	Film evaporators, climbing film falling film construction, working applications advantages Forced circulation, falling film evaporator construction, working applications advantages	Smart board	1,3,10/ 2	https:// www.y outube. com/wa tch?v=b pDTcp LUoYI	ACTIVE LEARNING
III	24	4/1/24	1	, introduction to distillation, simple distillation, advantages	Smart board	1,3,10/ 2		
	25	4/1/24	1	Steam distillation, vacuum distillation.	Smart board	1,3,10/ 2		
	26	18/1/2 4	1	Flash distillation, molecular distillation	Smart board	1,3,10/ 2		
	27	19/1/2 4	1	Fractional distillation principle method	Smart board	1,3,10/ 2		

	28	24/1/2 4	1	Min boiling point ,max boiling point mixtures,,plate column,packed column	Smart board	1,3,10/ 2		
	29	25/1/2 4	1	Drying introduction , objectives ,theory of drying,mechanism,	Smart board	1,2,3,9, 11/2		
	30	25/1/2 4	1	Tray ,vaccum, rotary dryer ,fluidized	Smart board	1,3,10/ 2	https://docs.google.com/forms/d/1sCwOzH4Vwjv8t5VyUumLiriwRTH25J4HJpUi2bx99nA/e/dit?pli=1	Problem solving- creative thinking
	31	27/1/2 4	1	Fluidized bed dryer,Freeze drying ,factors effecting selection of dryer.	Smart board	1,3,10/ 2	https://www.youtube.com/shorts/eg0ZWVeIxSU	ACTIVE LEARNING
	32	1/2/24	1	Mixing- introduction, objectives,applicati ons, mechanisms,factors	Smart board			
	33	1/2/24	1	Mixing of solids v- cone and double cone blender	Smart board			
	34	2/2/24	1	S-S Mixing equipment, Impellers, liquid- liquid mixers, operation, applications Statistical parameters,mixing indices,standard deviation, relative S.D, degree of homogeneity	Smart board	1,3,10/ 2		
	35	3/2/24	1	Mixing of solids mechnasims	Smart board	1,2,9/3		
	36	9/2/24	1	Mixing of	Smart	1,2,9/3		

				semisolids,filtration	board			
IV	37	10/2/2 4	1	Filtration-introduction ,mechanisms, types ,theory	Smart board	1,2,9/3		
	38	15/2/2 4	1	Filtration equipment,seitz,sint ered, edge filters	Smart board	1,2,3,4, 11/3.		
	39	15/2/2 4	1	Industrial filters ,plate and frame ,leaf,	Smart board	1,2,3,4, 11/3		
	40	16/2/2 4	1	rotary drum ,.catridge filters construction, working applications advantages,factorsn	Smart board	1,2,3,4, 9, 11/3		
	41	17/2/2 4	1	centrifugation theory and types	Smart board	1,9,10/ 4		
	42	21/2/2 4	1	Perforated ,nonperforated ,semi continuous,continuo us centrifuges construction, working applications advantages	Smart board	1,9,10/ 4		
V	43	22/2/2 4	1	Factors affecting material selection for plant construction,	Smart board	1,9,10/ 4		
	44	22/2/2 4	1	metals and non metals ferrous metals and non ferrous	Smart board	1,9,10/ 4		
	45	23/2/2 4	1	Non metals,organic and inorganic	Smart board	1,3,4,1 1/4		
	46	1/3/24	1	inroduction to corrosion, theories of corrosionClassification and Types of corrosion	Smart board	1,3,4,1 1/4		

	47	2/3/24	1	–general and localised Types of corrosion-structural and biological, prevention of corrosion.	Smart board	1,3,4,1 1/4		
	48	5/3/24	1	Basic material handling system	Smart board	1,3,4,1 1/5	https://docs.google.com/presentation/d/1o2Pk0ppjCua_bNW8gV3qNo_XT4b_0m1/edit?usp=drive_link&oid=107766377968506044969&rtpof=true&sd=true	ACTIVE LEARNING



RBVRR WOMEN'S COLLEGE OF PHARMACY

3-4-343, Barkathpura, Hyderabad - 500027, Ph: 040-27563065

SCHEDULE OF INSTRUCTIONS

LESSON PLAN

Academic year: 2023-2024

Name of the program: B. PHARMACY

Year: I/II Sem (SECTION-A)

Name of the subject: HUMAN ANATOMY AND PHYSIOLOGY-II

Subject code: BP 201 T

Name of the faculty: FATIMA UMAIRA SAEED

Department: PHARMACOLOGY

Designation: ASSISTANT PROFESSOR

TEXT BOOKS REFERRED

1. Essentials of Medical Physiology by K. Sembulingam and P. Sembulingam. Jaypee brothers medical publishers, New Delhi.
2. Anatomy and Physiology in Health and Illness by Kathleen J.W. Wilson, Churchill Livingstone, New York
3. Physiological basis of Medical Practice-Best and Tailor. Williams & Wilkins Co, Riverview, MI USA
4. Textbook of Medical Physiology- Arthur C, Guyton and John.E. Hall. Miamisburg, OH, U.S.A.
5. Principles of Anatomy and Physiology by Tortora Grabowski. Palmetto, GA, U.S.A.
6. Textbook of Human Histology by Inderbir Singh, Jaypee brothers medical publishers, New Delhi
7. Physiological basis of Medical Practice-Best and Tailor. Williams & Wilkins Co, Riverview, MI USA.
8. Textbook of Medical Physiology- Arthur C, Guyton and John. E. Hall. Miamisburg, OH, U.S.A.

COURSE OUTCOMES

CO1: Discuss the anatomy and physiology of the Nervous System

CO2: Describe gross Anatomy & Physiology of digestive system with associated disorders.

Explain formulation and role of ATP, Creatine Phosphate and BMR

CO3: Explain Anatomy & Physiology of respiratory and urinary system with associated

disorders.

CO4: Describe the anatomy and physiology of endocrine glands and pathophysiology of hyosecretion and hypersecretion of endocrine glands and related diseases.

CO5: Explain the structure and function of reproductive system and also describe the concept of DNA, protein synthesis and genetic pattern of inheritance

LESS ON NO.	DATE OF LECTURE	NO. OF PERIODS	NAME OF THE TOPIC	MODE OF TEACHING	ICT TOOL	PROGRAM ME OUTCOME
1	16/04/24	1	Nervous system: Organization of nervous system, neuron, neuroglia	Smart Board	https://www.youtube.com/watch?v=cNaFnRKwpFk	PO1, PO2, PO3, PO6, PO11
	18/04/24	1	Classification and properties of nerve fiber, electrophysiology, action potential	Smart Board		
	19/04/24	1	Nerve impulse, receptors, synapse, neurotransmitters.	Smart Board		
	20/04/24	1	Central nervous system: Meninges,	Smart Board		
	29/04/24	1	Ventricles of brain and cerebrospinal fluid	Smart Board		
	01/05/24	1	Structure and functions of cerebrum	Smart Board		
	03/05/24	1	Structure and functions of cerebrum	Smart Board		
	04/05/24	1	Structure and functions of Brain stem	Smart Board		
	06/05/24	1	Structure and functions of cerebellum	Smart Board		

	08/05/24	1	Structure and functions of cerebellum	Smart Board		
	09/05/24	1	Gross structure spinal cord	Smart Board		
	13/05/24	1	Functions of afferent and efferent nerve tracts, reflex activity	Smart Board		
2	03/06/24	1	Digestive system: Anatomy of GI Tract ,	Smart Board	https://www.youtube.com/watch?v=_T_vmCLyTzI	PO1, PO2, PO3, PO6, PO11
	05/06/24	1	Anatomy and functions of Salivary glands, stomach	Smart Board		
	07/06/24	1	Acid production, regulation in the stomach, pepsin role in protein digestion, Anatomy and functions of small intestine	Smart Board		
	10/06/24	1	Anatomy and functions of large intestine	Smart Board	QUIZ	
		1	Pancreas and liver, Movements of GIT	Smart Board	QUIZ	
	14/06/24	1	Digestion and absorption of nutrients, Disorders of GIT	Smart Board	QUIZ	
	15/06/24	1	Energetics Formation and role of ATP, Creatinine Phosphate and BMR.	Smart Board		
3	19/06/24	1	Respiratory system: Anatomy of respiratory system with special reference to anatomy of lungs.	Smart Board	https://www.youtube.com/watch?v=hQzNG89pESQ	PO1, PO2, PO3, PO6, PO11

					Glomerular Filtration Animation How urine is formed in our body?
21/06/24	1	Mechanism of respiration, regulation of respiration	Smart Board		
22/06/24	1	Lung Volumes and capacities	Smart Board	QUIZ	
01/07/24	1	Transport of respiratory gases	Smart Board		
03/07/24	1	Artificial respiration, and resuscitation method	Smart Board		
05/07/24	1	Urinary system Anatomy of urinary tract with special reference to anatomy of kidney	Smart Board	GOOGLE FORMS QUIZ	
06/07/24	1	Anatomy of Nephrons.	Smart Board		
08/07/24	1	Functions of kidney and urinary tract. Physiology of urine formation	Smart Board		
10/07/24	1	Micturition reflex and role of kidneys in acid base balance.	Smart Board		
12/07/24	1	Role of RAS in kidney and disorders of kidney	Smart Board		

4	13/07/24	1	Endocrine system: Classification of hormones.	Smart Board	PO1, PO2, PO6, PO9, PO11
	15/07/24	1	Mechanism of hormone action	Smart Board	
	17/07/24	1	Structure and functions of pituitary gland	Smart Board	
	19/07/24	1	Structure and functions of pituitary gland	Smart Board	
	20/07/24	1	Structure and functions of thyroid gland, parathyroid gland,	Smart Board	
	22/07/24	1	Structure and functions of adrenal gland, pancreas	Smart Board	
	24/07/24	1	Structure and functions of adrenal gland, pancreas	Smart Board	
	26/07/24	1	Structure and functions of pineal gland	Smart Board	
	27/07/24	1	Structure and functions of thymus	Smart Board	
	29/07/24	1	Endocrine disorders.	Smart Board	
5	31/07/24	1	Reproductive system : Anatomy of male reproductive system	Smart Board	PO1, PO2, PO3, PO6, PO9, PO11
	02/08/24	1	Anatomy Female reproductive system	Smart Board	
	03/08/24	1	Functions of male and female reproductive system	Smart Board	
	05/08/24	1	Sex hormones	Smart Board	

	07/08/24	1	Physiology of menstruation	Smart Board	
	09/08/24	1	Fertilization, spermatogenesis, oogenesis	Smart Board	https://www.youtube.com/watch?v=HuWCwyRiaUI
	12/08/24	1	Pregnancy and parturition	Smart Board	
	14/08/24	1	Introduction to genetics Chromosomes, genes and DNA	Smart Board	
	16/08/24	1	Protein synthesis, genetic pattern of inheritance	Smart Board	From DNA to protein - 3D



RBVRR WOMEN'S COLLEGE OF PHARMACY

3-4-343, Barkathpura, Hyderabad - 500027, Ph: 040-27563065

SCHEDULE OF INSTRUCTIONS

LESSON PLAN

Academic year: 2023-2024

Name of the program: B. PHARMACY

Year: III/V Sem (SECTION-B)

Name of the subject: PHARMACOLOGY-II

Subject code: BP 503 T

Department: PHARMACOLOGY

Name of the faculty: FATIMA UMAIRA SAEED

Designation: ASSISTANT PROFESSOR

TEXT BOOKS REFERRED

1. K.D.Tripathi. Essentials of Medical Pharmacology, JAYPEE Brothers Medical Publishers (P) Ltd, New Delhi.
2. Padmaja Uday Kunar. A textbook of Medical Pharmacology, JAYPEE Brothers Medical Publishers.
3. Rang H. P., Dale M. M., Ritter J. M., Flower R. J., Rang and Dale's Pharmacology, Churchill Livingstone, Elsevier
4. Katzung B. G., Masters S. B., Trevor A. J., Basic and clinical pharmacology, Tata Mc Graw-Hill.
5. Goodman and Gilman's, The Pharmacological Basis of Therapeutics
6. Marry Anne K. K., Lloyd Yee Y., Brian K. A., Robbin L.C., Joseph G. B., Wayne A. K., Bradley R.W., Applied Therapeutics, The Clinical use of Drugs, The Point Lippincott Williams & Wilkins.
7. Mycek M.J, Gelnet S.B and Perper M.M. Lippincott's Illustrated Reviews- Pharmacology.
8. Sharma H. L., Sharma K. K., Principles of Pharmacology, Paras medical publisher

COURSE OUTCOMES

CO1: Discuss the anatomy and physiology of the Nervous System

CO2: Classify and describe the mechanism/s of action, doses, adverse effect, indication and contraindications of the drugs which act on blood and urinary system like hematinics, coagulants, anticoagulants, antiplatelets, fibrinolytics, plasma expanders, diuretics and antidiuretics.

CO3: Classify and describe the mechanism/s of action, doses, adverse effect, indication and contraindications of the drugs which act by modulating autacoids including antihistaminics, 5-HT modulating drugs, NSAIDS, drugs for gout and anti-rheumatic drugs

CO4: Describe the pharmacological actions of drugs used in endocrine disorders (diabetes mellitus, thyroid disorders and osteoporosis)

CO5: Discuss the principles and applications of bioassay, explore its types including advantages and disadvantages.

LESSON NO.	DATE OF LECTURE	NO. OF PERIODS	NAME OF THE TOPIC	MODE OF TEACHING	ICT TOOL	PROGRAM OUTCOME
1	15/11/23	1	Introduction to hemodynamic	Chalk and Board	https://www.youtube.com/watch?v=GnpLm9fzYxU	PO1, PO2, PO9
	16/11/2023 17/11/23	2	Electrophysiology of heart	Chalk and Board		
	18/11/23 &20/11/23	2	Drugs used in congestive heart failure	Smart Board		
	22/11/23 23/11/23	1	Anti-hypertensive drugs	Smart Board		
	24/11/23	1	Anti-anginal drug	Smart Board		
	28/11/23	1	Anti-arrhythmic drugs	Smart Board		
	29/11/23	1	Anti-hyperlipidemic drugs	Smart Board		
2	30/11/23 01/12/23	2	Drugs used in therapy of Shock	Chalk and Board	Blood coagulation Blood clotting coagulation Process of blood clotting 3D Video	PO1,PO2,PO9,P011
	4/12/23 6/12/23	2	Hematinics	Chalk and Board		
	7/12/23	1	Coagulants and Anticoagulants	Chalk and Board		
	8/12/23	1	Anticoagulants.	Chalk and Board		

	11/12/23 13/12/23	2	Fibrinolytics	Chalk and Board		
	14/12/23 15/12/23	2	Antiplatelet drugs	Chalk and Board		
	18/12/23 20/12/23	2	Plasma volume expanders	Chalk and Board		
	21/12/23 22/12/23	2	Diuretics	Smart Board		
	27/12/23, 28/12/23 29/12/23	3	Anti-diuretics.	Smart Board		
3	03/01/24	1	Introduction to Autacoids and classification	Chalk and Board		PO1, PO2, PO11
	04/01/24	1	Histamine and its Antagonists	Chalk and Board		
	18/01/24	1	5-HT physiological and pharmacological actions	Chalk and Board		
	19/01/24	1	5-HT antagonists	Chalk and Board		
	22/01/24	1	Prostaglandins	Chalk and Board		
	24/01/24	1	Thromboxanes, Leukotrienes.	Chalk and Board		
	25/01/24	1	Angiotensin, Bradykinin and Substance P	Chalk and Board		
	27/01/24	1	NSAIDs	Chalk and		

				Board		
	29/01/24	1	Anti-gout drugs g. Antirheumatic d	Chalk and Board		
	31/01/24	1	Antirheumatic drugs	Chalk and Board		
4	01/02/24	1	Basic concepts in endocrine pharmacology.	Chalk and Board		PO1, PO2, PO9, P011.
	02/02/24	1	Anterior Pituitary hormones- analogues and their inhibitors. Thyroid hormone analogues	Chalk and Board		
	05/07/24	1	Thyroid hormones- analogues and their inhibitors.	Chalk and Board		
	07/02/24	1	Hormones regulating plasma calcium level- Parathormone, and Vitamin-D	Chalk and Board		
	08/02/24 09/02/24	2	Calcitonin	Chalk and Board		
	12/02/24	1	Insulin and glucagon.	Chalk and Board		
	14/02/24	1	Oral Hypoglycemic agents	Chalk and Board		
	15/02/24	1	ACTH and corticosteroids.	Chalk and Board		
	16/02/24	1	Corticosteroids.	Chalk and Board		
5	19/02/24	2	Androgens and Anabolic	Chalk and		

21/02/24		steroids.	Board	PO1, PO2, PO9
22/02/24	1	Estrogens, progesterone	Chalk and Board	
23/02/24	1	Oral contraceptives	Chalk and Board	
26/02/24	1	Drugs acting on the uterus.	Chalk and Board	
28/02/24	1	Principles and applications of bioassay its types.	Chalk and Board	
29/02/24	1	Bioassay of insulin, oxytocin,	Chalk and Board	
01/03/24	1	Bioassay of vasopressin, ACTH,d-tubocurarine,digitalis,	Chalk and Board	
04/02/24	1	Bioassay of Histamine and 5-HT	Chalk and Board	

RBVRR Women's College of Pharmacy

(Approved by AICTE & PCI, Affiliated to Osmania University)

SCHEDULE OF INSTRUCTIONS

COURSEPLAN

Academic year: 2023-24

Name of the program: B.Pharmacy

Year: III Sem / II Year

Name of the subject: POC-II Section B

Course/subject code: **BP202T**

Name of the faculty: Mrs.P.ARCHANA

Designation: Asst. Professor

Department: Pharmaceutical Chemistry

Textbooks referred:

T1. Organic Chemistry by Morrison and Boyd

T2. Organic Chemistry by I.L. Finar , Volume-I

T3. Textbook of Organic Chemistry by B.S. Bahl & Arun Bahl.

T4. Organic Chemistry by P.L.Soni

T5. Practical Organic Chemistry by Mann and Saunders.

T6. Vogel's text book of Practical Organic Chemistry

T7. Advanced Practical organic chemistry by N.K.Vishnoi.

T8. Introduction to Organic Laboratory techniques by Pavia, Lampman and Kriz.

T9. Reaction and reaction mechanism by Ahluwaliah/Chatwal

T10. Organic Chemistry by Bhupinder Mehta and Manju Mehta

T11. Organic Chemistry (Vol.1) by Chittaranjan Bhakta

Lesson NO	Date of Lecture	No. of Periods	Name of the Topic	PO'S	Mode of Teaching
1	14-11-23	1	Introduction to Organic Chemistry Structure Of Benzene	1,2	Smart Board
	15-11-23	1	Resonance theory- Concept of Resonance In Benzene	1,2	Smart Board, PPT
	16-11-23	1	KEKULES structure of benzene	1,2	
	17-11-23	1	Molecular orbital theory	1,2	Smart Board
	21-11-23	1	Criterion for Aromaticity with examples , Huckel's Rule	1,2	Smart Board
	22-11-23	1	Benzene-Preparation, Nomenclature, physical properties	1,2	Smart Board
	23-11-23	1	Chemical properties of benzene	1,2	Smart Board
2	24-11-23	1	General mechanism of Electrophilic Aromatic Substitution Reaction	1,2	Smart Board, PPT
	25-11-23	1	Nitration, Halogenation, Sulphonation	1,2	Smart Board
	28-11-23	1	Sulphonation, Friedel crafts Alkylation- Reactivity, Limitations	1,2	Smart Board
	29-11-23	1	Friedel crafts Acylation	1,2	Smart Board
	2-12-23	1	Friedel crafts alkylation vs acylation	1,2	Smart Board
	4-12-23	1	Structure And Uses Of few important Aromatic Hydrocarbons DDT ,saccharin, chloramine	1,2	Smart Board
3	5-12-23	1	Theory of Reactivity , Theory of Orientation Classifications of Substituents,	1,2	Smart Board, PPT
4	6-12-23	1	Effect Of Substituents On Reactivity and Orientation, Halogens as substituents- deactivators and O/P directors	1,2	Smart Board
5	25-1-24	1	Phenols- Introduction , Nomenclature, Physical Properties, Methods of preparation, Qualitative Tests of phenols Dow's process, cumene claisen rearrangement	1,2	Smart Board
6	27-1-24	1	Acidic nature Of Phenols, Effect Of Substituents On Acidic nature of substituted and isomeric phenols	1,2	Smart Board
	29-1-24	1	Reactions due to acidic nature of phenols	1,2	Smart Board
	30-1-24	1	Electrophilic substitution reactions of phenols	1,2	Smart Board
	31-1-24	1	Fries rearrangement, Kolbe Schmidt reaction	1,2	Smart Board, PPT

	1-2-24	1	Riemer-Tiemann reaction, Nitrosation, oxidation, reduction	1,2,9	Smart Board
	2-2-24	1	,Azo dye formation	1,2,9	Smart Board
	3-2-24	1	Structure and Uses Of Phenol, cresol, resorcinol, naphthols	1,2,9	Smart Board
7	6-2-24	1	Aromatic amines- Introduction , Nomenclature, Physical Properties, Methods of preparation.	1,3	Smart Board
	7-2-24	1	Separation of Amines,	1,3	Smart Board
	9-2-24	1	Basicity Of Amines ,	1,3	Smart Board
8	13-2-24	1	Effect Of Substituents On Basicity & Chemical Reactions of Aromatic amines (ESR)	1,3	Smart Board
9	14-2-24	1	Chemical Reactions of Aromatic amines	1,3	Smart Board
10	15-2-24	1	Aryl Diazonium Salts - Methods of preparation,	1,3,9	Smart Board
	20-2-24	1	Synthetic Uses Of Aryl Diazonium Salts		
11	21-2-24	1	Aromatic Acids -- Introduction , Nomenclature, Physical Properties, Methods of preparation	1,3	Smart Board
	22-2-24	1			
12	23-2-24	1	Acidic nature of Aromatic Carboxylic Acids	1,3	Smart Board
	24-2-24	1	Effect Of Substituents On Acidity, Relative order of their acidic strengths	1,3	Smart Board
	26-2-24	1	Chemical Reactions of Carboxylic Acids, Important Reactions Of Benzoic Acid.	1,3	Smart Board
13	3-1-24	1	Fats and oils : Definition, classification and differences between fats and oils with suitable examples, Nomenclature of fats and oils, Fatty Acids--Definition, Classification and structures	1,3	Smart Board, PPT
	4-1-24	1	Determination of Analytical Constants, Significance and Principles Involved in their determination : Acid Value , Saponification Value, Ester Value , Iodine Value,	1,3	Smart Board
	4-1-24	1	Acetyl Value , Total fat content , Reichert Meissl (RM) Value , Poelencki value, Significance of fats and oils	1,3	Smart Board
	18-1-24	1	Simple and complex lipids	1,3	Smart Board
	19-1-24	1	Derived lipids, Extraction of fats and oils	1,3	Smart Board
14	20-1-24	1	Chemical Reactions of Fats and oils Hydrolysis , Saponification	1,3	Smart Board
s	23-1-24	1	Hydrogenation , Rancidity Of Oils , Drying Of Oils	1,3	Smart Board
15	11-12-23	1	Polynuclear Hydrocarbons - Definition and Classification of Polynuclear Hydrocarbons Structure,	1	Smart Board
16	12-12-23	1	Aromaticity Of Naphthalene, preparations of naphthalene	1,2	Smart Board

17	13-12-23	1	Chemical properties Of Naphthalene(oxidation,reduction,addition reactions)	1,2	Smart Board
	14-12-23	1	Chemical properties Of Naphthalene(ESR)	1,2	Smart Board
	16-12-23	1	Naphthalene ESR	1,2	Smart Board
	19-12-23	1	Derivatives of naphthalene	1,2	Smart Board
18	20-12-23	1	Structure, Aromaticity and Chemical properties of anthracene	1,2	Smart Board
	21-12-23	1	Chemical properties of anthracene ,Structure, Aromaticity and Chemical propeties of phenanthrene	1,2	Smart Board
19	21-12-23	1	Structure and Uses of few Polynuclear Hydrocarbons- Naphthalene and its derivatives	1,2,9	Smart Board
	23-12-23	1	Derivatives Of Anthracene	1,2,9	Smart Board
	27-12-23	1	Diphenyl methane & Triphenyl methane And their Derivatives	1,2,9	Smart Board
	28-12-23	1	Uses of phrenanthrene, naphthalene, anthracene, Diphenyl methane & Triphenyl methane	1,2,9	Smart Board
20	27-2-24	1	Cycloalkanes: Introduction ,Methods of preparation	1,2	Smart Board
	28-2-24	1	Nomenclature, Physical Properties, Chemical Reactions Of Cyclopropane And Cyclobutane	1,2	Smart Board
	2-3-24	1	Stabilityof cycloalkanes– Baeyer’s Strain Theory & Limitations , Coulson motif theory	1,2	Smart Board
	5-3-24	1	SachseMohr’sTheory	1,2	Smart Board, PPT



SCHEDULE OF INSTRUCTIONS

LESSON PLAN

Academic year: 2023-2024

Name of the program: PHARM D

Year: V YEAR

Name of the subject: PHARMACOEPIDEMIOLOGY AND PHARMACOECONOMICS

Subject code: 5.2 T

Department: PHARMACOLOGY

Name of the faculty: FATIMA UMAIRA SAEED

Designation: ASSISTANT PROFESSOR

TEXT BOOKS REFERRED

1. Pharmacoepidemiology and Pharmacoeconomics - Concepts and Practice - Dr. K. G. Revikumar.
2. Parks Textbook of Preventive and Social Medicine. 27th Edition, 2023, Park, K.
3. Pharmacoeconomics: From Theory to Practice, Second Edition, Renee J. G. Arnold, Patrick.

COURSE OUTCOMES

- CO1: Explain the origin, evaluation, principles, and outcomes of pharmacoepidemiological studies comprehensively.
- CO2: Elaborate study designs and methods in Pharmacoepidemiology and Calculate and interpret risk
- CO3: Apply pharmacoepidemiological concepts, to access real-world datasets from different sources based on which a study protocol can be designed to investigate the potential risks associated with a specific class of drugs.
- CO4: Define pharmacoeconomics as the study of the economic aspects of healthcare interventions and Explain its role in informing decision-making processes for healthcare resource allocation.
- CO5: Explain the main methods and techniques and key components used in pharmacoeconomic evaluations .
- CO6: Understand the different software and tools commonly used in pharmacoeconomic analysis.



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LESS ON NO.	DATE OF LECTURE	NO. OF PERIODS	NAME OF THE TOPIC	MODE OF TEACHING	ICT TOOL	PROGRAM OUTCOME
1	25/10/23	1	Pharmacoepidemiology : Definition and scope:	Chalk and Board		PO1, PO6, PO7, PO9, PO11
	25/10/23	1	Origin and evaluation of pharmacoepidemiology	Chalk and Board		
	26/10/23	1	Need for pharmacoepidemiology	Chalk and Board		
	28/10/23	1	Aims and applications.	Chalk and Board		
	30/10/23	1	Aims and applications.	Chalk and Board		
	31/10/23	1	Applications of Pharmacoepidemiology	Chalk and Board		
	1/11/23	1	Measurement of outcomes in pharmacoepidemiology	Chalk and Board		PO1, PO3, PO6, PO7, PO9, PO11
	2/11/23	1	Outcome measure and drug use measures	Chalk and Board		
	3/11/23	1	Prevalence, incidence and incidence rate.	Chalk and Board		
	4/11/23	1	Monetary units, number of prescriptions, units of drugs dispensed,	Chalk and Board		
	6/11/23	1	Defined daily doses and prescribed daily doses,	Chalk and Board		
	7/11/23	1	Medication adherence measurement	Smart Board	https://youtu.be/AZQMhUzBclw?si=A1aephjnTIgtNNbs	



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7/11/23	1	Medication adherence measurement	Chalk and Board		
8/11/23	1	Medication adherence measurement	Chalk and Board		
9/11/23	1	Concept of risk in pharmacoepidemiology	Chalk and Board		
10/11/23	1	Measurement of risk, attributable risk and relative risk	Chalk and Board		
14/11/23	1	Attributable risk and relative risk	Chalk and Board		
15/11/23	1	Time-risk relationship and odds ratio	Chalk and Board		
16/11/23	1	Introduction to Pharmacoepidemiological methods	Chalk and Board		
17/11/23	1	Pharmacoepidemiological methods, Drug utilization review	Chalk and Board		PO1, PO6, PO7, PO9, PO11
18/11/23	1	Case reports, case series, Survey of Drug use	Chalk and Board		
20/11/23	1	Cross – sectional studies with case studies	Chalk and Board		
21/11/23	1	Cohort and case control	Chalk and Board		
04/11/23	1	Case Cohort and Meta Analysis	Chalk and Board		
05/11/23	1	Spontaneous reporting	Chalk and Board		



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06/11/23	1	Prescription event monitoring and record linkage system	Chalk and Board	
07/11/23	1	Sources of data for pharmacoepidemiological studies	Chalk and Board	
08/11/23	1	Ad Hoc data sources	Chalk and Board	
11/12/23	1	Ad Hoc data sources and automated data systems	Chalk and Board	
12/12/23	1	Ad Hoc data sources and automated data systems	Chalk and Board	
13/12/23	1	Selected special applications of pharmacoepidemiology	Chalk and Board	
14/12/23	1	Selected special applications of pharmacoepidemiology	Chalk and Board	
15/12/23	1	Studies of vaccine safety	Chalk and Board	
16/12/23	1	Studies of vaccine safety	Chalk and Board	
18/12/23	1	Hospital pharmacoepidemiology	Chalk and Board	
19/12/23	1	Hospital pharmacoepidemiology	Chalk and Board	
20/12/23	1	Pharmacoepidemiology and risk management	Chalk and Board	
21/12/23	1	Pharmacoepidemiology and risk management	Chalk and Board	



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	22/12/23	1	Drug induced birth defects.	Digital Board	https://www.youtube.com/watch?v=Y51Wrckdu68	
	02/04/24	1	Pharmacoeconomics: Definition, History of pharmacoeconomic evaluations	Chalk and Board		
2	03/04/24	1	Pharmacoeconomics: Definition, History of pharmacoeconomic evaluations	Chalk and Board		PO1, PO6, PO7, PO9, PO11
	05/04/24	1	Role in formulary management decisions	Chalk and Board		
	06/04/24	1	Decision making analysis.	Chalk and Board		
	08/04/24	1	Cost – minimization with case study	Chalk and Board	QUIZ	
	15/04/24	1	Cost- benefit analysis with case study	Chalk and Board	QUIZ	
	16/04/24	1	Cost – effectiveness with case study	Chalk and Board		
	18/04/24	1	Cost utility with case study	Chalk and Board		
	19/04/24	1	Applications of Pharmacoeconomics	Chalk and Board		PO1, PO6, PO7, PO9, PO11
	20/04/24	1	Applications of Pharmacoeconomics	Chalk and Board		
3	22/04/24	1	Software and case studies: Treeage	Chalk and Board		PO1, PO4, PO6, PO7,



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	23/04/24	1	Software and case studies MS Excel	Chalk and Board		PO9, PO11
	24/04/24	1	Software and case studies Health economic evaluation	Chalk and Board		



College Code: 1706

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(Approved by the AICTE, PCI & Affiliated to Osmania University)

Recognized under Section 2(f) of the UGC Act 1956

EAMCET Code: RBVW | PGECET Code: RBVW1

www.rbvrrwcp.org | Email: rbvrrwcoph@rediffmail.com & rbvrrwcp2006@gmail.com

LESSON PLAN:

Academic year: 2023-2024

Name of the program: Pharm D

Year: I

Name of the subject: HUMAN ANATOMY & PHYSIOLOGY

Course/subject code:

Name of the faculty: M.KAVITHA

Department: PHARMACOLOGY

Textbooks referred:

T₁: Principles of anatomy and physiology by Tortora G.J., and S.R.Grabowski, Volume I & II, John Wiley and Sons Inc, Singapore.

T₂: Principles of Anatomy and Physiology by Ross & Wilson, 10th Edition 2007, Churchill Livingstone Publishers, New York.

T₃: Essentials of Medical Physiology by K. Sembulingam and P. Sembulingam. Jaypee brothers medical publishers, New Delhi.

T₄: Text book of Medical Physiology- Arthur C, Guyton and John E. Hall. Miamisburg, OH, U.S.A.

Unit Plan	Lesson No.	Date	No. of periods	Name of the topic	Mode of Teaching	PO/C O	ICT tool used	Link	Type of Activity
1	1	6/10/2023	1	Introduction to Human Anatomy and Physiology	Blackboard, chalk piece	1,11/1			
2		10/10/2023	1	Scope of anatomy and physiology, basic terminologies used in this subject	Blackboard, chalk piece and pictorial representation using Smart board.	1,11/2			
	3	12/10/2023	1	Structure of cell – its components	Blackboard, chalk piece and pictorial representation using smart board.	1,3,11/3			
		13/10/2023	1	Functions of cell	Blackboard, chalk piece	1,3,11/3			
		26/10/2023	1	Elementary tissues of the human body: epithelial Tissues.	Black Board, Chalk piece and pictorial representation using smart board	1,3,11/3			
		27/10/2023	1	Connective Tissues- Dense, loose, Adipose tissues	Black Board and Chalk piece pictorial representation using smart board	1,3,11/3	ppt	CONNECTIVE TISSUES PPT.pptx.pdf	

4	a)	28/10/2023	1	Hyaline, elastic & fibrocartilage, skeletal muscle bone,	Black Board and Chalk piece pictorial representation using smart board	1,3,11/3			
		30/10/2023	1	Muscular and nervous tissues-their sub-types and characteristics	Black Board and Chalk piece	1,3,11/3			
		2/11/2023	1	Osseous system – structure of the Axial Skeleton	Black Board and Chalk piece	1,3,11/4			
		3/11/2023	1	Composition of the Axial Skeleton	Black Board and Chalk piece	1,3,11/4			
		4/11/2023	1	Functions of the Axial Skeleton	Black Board and Chalk piece	1,3,11/4			
		6/11/2023	1	structure, composition and functions of the Appendicular Skeleton.	Black Board and Chalk piece	1,3,11/4	ppt	appendicularskeleton.pdf	Active learning
		17/11/2023		Classification and Types of joints		1,3,11/4			
		18/11/2023	1	Movements of joints and disorders of joints	Black Board and Chalk piece	1,3,11/4			
		20/11/2023	1	Detailed anatomy of Axial skeletal system	Black Board and Chalk piece	1,3,11/4			
		24/11/2023		Carpals, Tarsals, Femur, Pectoral girdle		1,3,11/4			

5		25/11/2023		Pelvic girdle, tibia, fibula		1,3,11/4			
		1/12/2023	1	Composition and functions of blood	Black Board and Chalk piece	1,3,11/4			
		04/12/2023	1	Haemopoiesis and disorders of blood components (definition of disorder)	Blackboard, chalk piece and pictorial representation using smart board.	1,6,9,11/5			
		05/12/2023	1	Blood groups and Clotting factors and mechanism	Blackboard, chalk piece and pictorial representation using smart board.	1,6,9,11/5			
		08/12/2023	1	Platelets and disorders of coagulation	Black Board and Chalk piece	1,6,9,11/5			
6		11/12/2023		Erythropoiesis	Black Board and Chalk piece	1,6,9,11/5			
		6/2/2024	1	Lymph and lymphatic system, composition, formation and circulation. Spleen: structure and functions, Disorders	Black Board and Chalk piece	1,6,9,11/6			
		9/2/2024	1	Disorders of lymphatic system (definition only)	Black Board and Chalk piece	1,6,9,11/6			
7		15/12/2023	1	Cardiovascular system a) Anatomy of heart	Black Board and Chalk	1,2,6,11/7			

					piece				
		18/12/2023	1	Functions of heart b) Blood vessels and circulation (Pulmonary, coronary and systemic circulation)	Black Board and Chalk piece	1,2,6,11/7			
		19/12/2023	1	c)Electrocardiogram (ECG) d) Cardiac cycle and heart sounds	Black Board and Chalk piece	1,2,6,11/7			
		22/12/2023		Cardiac output & Heart sounds		1,2,6,11/7			
		29/12/2023	1	e) Blood pressure – its maintenance and regulation	Black Board and Chalk piece	1,2,6,11/7			
		2/1/2024	1	f) Definition of the following disorders Hypertension, Hypotension, Arteriosclerosis, Atherosclerosis,	Black Board and Chalk piece	1,2,6,11/7			
		9/1/2024		Angina, Myocardial infarction, Congestive heart failure, Cardiac arrhythmias		1,2,6,11/7			
8		12/2/2024	1	Respiratory system a) Anatomy of respiratory organs and functions b) Mechanism / physiology of respiration and regulation of respiration	Blackboard, chalk piece and pictorial representation using smart board.	1,2,6,11/8			
		13/2/2024	1	c) Transport of respiratory gases	Black Board and Chalk piece	1,2,6,11/8			

9	16/2/2024	1	d) Respiratory volumes and capacities, and Definition of: Hypoxia, Asphyxia, Dybarism, Oxygen therapy and resuscitation.	Black Board and Chalk piece	1,2,6,11/8	ppt	file:///F:/New%20folder%20(2)/Anatomy%20of%20respiratory%20system.pptx	Active learning
	22/1/2024	1	Digestive system b) a) Anatomy and physiology of GIT	Smart board	1,6,11/9	ppt	file:///F:/Digestive%20system/Digestivesystem-Disorders.pptx	Active learning
	23/1/2024	1	b) Anatomy and functions of accessory glands of GIT: Mouth, salivary glands, Teeth, Oesophagus	Black Board and Chalk piece	1,6,11/9			
	29/1/2024	1	b) Anatomy and functions Gall bladder, pancreas, stomach	Black Board and Chalk piece	1,6,11/9			
	30/1/2024	1	b) Anatomy and functions of Pancreas, liver and bile		1,6,11/9			
	2/2/2024	1	Anatomy and functions of Small intestine and large intestine c) Digestion and absorption		1,6,11/9			
	10	5/2/2024	1	d) Disorders of GIT (definitions only)	Black Board and Chalk piece	1,2,6,11/10		
27/2/2024		1	Nervous system a) Definition and classification of nervous system	Black Board and Chalk piece	1,2,6,11/10			
1/3/2024			Types of nerves, cranial nerves		1,2,6,11/10			

11		11/3/2024		Neuroglia types, properties and classification of nerve fibres		1,2,6,11/10			
		12/3/2024		Nervous system, electrophysiology synapses		1,2,6,11/10			
		15/3/2024		Nervous system, receptors and neurotransmitters		1,2,6,11/10			
		18/3/2024		Lobes, sulcus of brain		1,2,6,11/10			
		19/3/2024		b) Anatomy, physiology and functional areas of cerebrum		1,2,6,11/10			
		22/3/2024		b) Anatomy, physiology of cerebellum		1,2,6,11/10			
		26/3/2024	1	d) Anatomy and physiology of mid brain e) Thalamus, hypothalamus and Basal Ganglia	Black Board and Chalk piece	1,2,6,11/10			
		26/3/2024	1	f) Spinal cord: Structure & reflexes – mono-poly-planter g) Cranial nerves – names and functions h) ANS – Anatomy & functions of sympathetic & parasympathetic N.S.	Black Board and Chalk piece	1,2,6,11/10	ppt	autonomi cnervous system.p df	Active learning
		19/2/2024	1	Urinary system a) Anatomy and physiology of urinary system	Black Board and Chalk piece	1,2,3,6,11/11			
		19/2/2024	1	b) Formation of urine	Black Board and Chalk piece	1,2,3,6,11/11			

12	23/2/2024	1	C) Renin Angiotensin system – Juxtaglomerular apparatus - acid base Balance	Black Board and Chalk piece	1,2,3,6,1 1/11			
	26/2/2024	1	d) Clearance tests and micturition	Black Board and Chalk piece	1,2,3,6,1 1/11			
	15/4/2024	1	Endocrine system a) Pituitary gland	Black Board and Chalk piece	1,2,3,6,1 1/12			
	19/4/2024	1	c) Thyroid and Parathyroid glands	Black Board and Chalk piece	1,2,3,6,1 1/12			
	22/4/2024	1	b) Adrenal gland	Black Board and Chalk piece	1,2,3,6,1 1/12			
	23/4/2024	1	Sex hormones	Black Board and Chalk piece	1,2,3,6,1 1/12			
13	26/4/2024	1	d) Pancreas and gonads	Black Board and Chalk piece	1,2,3,6,1 1/12			
	10/6/2024	1	Reproductive system a) Male reproductive system	Black Board and Chalk piece	1,3,6,11/ 13			
	10/6/2024	1	Female reproductive system	Black Board and Chalk piece	1,3,6,11/ 13			

		11/6/2024	1	b) Female Reproductive hormones – Physiology of menstruation	Black Board and Chalk piece	1,3,6,11/13				
14		14/6/2024	1	c) Spermatogenesis & Oogenesis d) Sex determination (genetic basis)	Black Board and Chalk piece	1,3,6,11/13				
		18/6/2024		e) Pregnancy and maintenance and parturition f) Contraceptive devices	Blackboard, chalk piece and pictorial representation using smart board	1,3,6,11/13				
		10/5/2024		Sense organs a) Eye	Blackboard, chalk piece and pictorial representation using smart board	1,3,6,11/14				
		13/5/2024		b) Ear c) Tongue & Nose	Blackboard, chalk piece and pictorial representation using smart board	1,3,6,11/14				
		14/5/2024		d) Skin	Blackboard, chalk piece and pictorial representation using smart board	1,3,6,11/14				
	15		30/4/2024		Skeletal muscles a) Histology b) Physiology of Muscle	Blackboard, chalk piece and	1,3,6,11/15			

16			contraction	pictorial representation using smart board				
		1/5/2024	d) Physiological properties of skeletal muscle and their disorders (definitions)	Blackboard, chalk piece and pictorial representation using smart board	1,3,6,11/15			
		21/6/2024	Sports physiology a) Muscles in exercise, Effect of athletic training on muscles and muscle performance,	Blackboard, chalk piece and pictorial representation using smart board	1,3,6,11/15			
		24/6/2024	b) Respiration in exercise, CVS in exercise, Body heat in exercise, Body fluids and salts in exercise	Blackboard, chalk piece and pictorial representation using smart board	1,3,6,11/15			
		29/6/2024	b) c) Drugs and athletics	Blackboard, chalk piece and pictorial representation using smart board	1,8,10,11/16			

Signature of principal

RBVRR Women's College of Pharmacy

(Approved by AICTE & PCI, Affiliated to Osmania University)

Barkatpura, Hyderabad – 500 027.

COURSE PLAN (2023-24)

COURSE SCHEDULE

Academic year: **2023-2024**
Name of the program: **Pharm D II Year**
Name of the subject: **Pathophysiology (Theory)**

Name of the faculty: **Dr. Fatima Khader Unisa**
Designation: **Assistant professor**
Department: **Pharmacy Practice**

COURSE OBJECTIVES:

- 1. Describe the basic concepts of reversible-irreversible cell injury: their mechanisms, morphology and cellular adaptations: atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia.**
- 2. Define and describe the general features of acute and chronic inflammation including stimuli, vascular and cellular events**
- 3. Describe the process of repair and regeneration including wound healing and its types.**
- 4. Discuss the basic functions of the immune system and describe specific types of immune system diseases. Describe the HLA system and the immune principles involved in transplant and mechanism of transplant rejection**
- 5. Illustrate various mechanisms that regulate Type I, II, III & IV hypersensitivity reactions.**
- 6. Enumerate carcinogens and explain the process of carcinogenesis; compare and contrast benign and malignant neoplasms.**
- 7. Describe the etipathogenesis, clinical manifestations, and management of various states of shock.**
- 8. Describe the pathogenesis of disorders caused by air pollution, tobacco, alcohol, protein calorie malnutrition and starvation.**
- 9. Discuss the etiology, pathogenesis, complications, and clinical significance of selected disorders of the nervous, endocrine, cardiovascular, gastrointestinal, urinary and respiratory system.**
- 10. Discuss the causative agents ,risk factors, etiology, pathophysiology, clinical manifestations, and diagnostic tests related to infectious diseases**

Text Books referred:

Pathologic basis of disease by- Cotran, Kumar, Robbins

Textbook of Pathology- Harsh Mohan

Textbook of Pathology- Y.M. Bhide

Clinical Pharmacy and Therapeutics; Second edition; Roger Walker; Churchill Livingstone publications

Relevant review articles from recent medical and pharmaceutical literature.

Unit No	No of Lesson	Date of Lecture	No. of Periods	Name of Topic	POs	Mode of Teaching
UNIT 1- BASIC PRINCIPLES OF CELL INJURY AND ADAPTATION						
1	1	25-10-2023 27-10-2023 30-10-2023 31-10-2023 01-11-2023 03-11-2023 06-11-2023 07-11-2023 08-11-2023	9	Causes, Pathogenesis and morphology of cell injury	PO1,2,3,11	Digital Board
	2	10-11-2023	1	Abnormalities in lipoproteinaemia	PO1,2,3,11	Digital Board
	3	14-11-2023 15-11-2023	2	Glycogen infiltration and glycogen infiltration and glycogen infiltration and glycogen storage diseases	PO1,2,3,11	Digital Board
UNIT 2- INFLAMMATION						
2	3	20-11-2023 21-11-2023 22-11-2023 24-11-2023	4	Pathogenesis of acute inflammation	PO1,2,3,11	Digital Board
	4	28-11-2023 29-11-2023 01-12-2023 04-12-2023 05-12-2023	5	Chemical mediators in inflammation	PO1,2,3,11	Digital Board

	5	06-12-2023 08-12-2023 15-12-2023 18-12-2023 19-12-2023	5	Types of chronic inflammation	PO1,2,3,11	Digital Board
UNIT 3 DISEASES OF IMMUNITY						
3	6	20-12-2023 22-12-2023	2	Introduction to Tand B cells	PO1,3,4	Digital Board
	7	27-12-2023	1	MHC proteins or transplantation antigens	PO1,2,3,11	Chalk and Board
	8	29-12-2023 30-12-2023 2-01-2024 03-01-2024 04-01-2024 05-01-2024	6	Immune tolerance - Hypersensitivity, Hypersensitivity type I, II, III, IV	PO1,2,3,11	Chalk and Board
	9	17-01-2024	1	Biological significance, Allergy due to food, chemicals and drugs	PO1,2,3,11	Chalk and Board
	10	19-01-2024 22-01-2024 23-01-2024	3	Autoimmunity Criteria for autoimmunity, classifications of autoimmune diseases in man, mechanism of autoimmunity	PO1,2,3,11	Chalk and Board
	11	24-01-2024 29-01-2024	2	Acquired immune deficiency syndrome (AIDS)	PO1,2,3,11	Chalk and Board
	12	30-01-2024	1	Amyloidosis	PO1,2,3,11	Chalk and Board

UNIT 4 CANCER

4	13	31-01-2024 02-02-2024 05-02-2024	3	Differences between benign and malignant tumors, Histological diagnosis of malignancy	PO1,3,9,11,	Chalk and Board
	14	06-02-2024 07-02-2024 09-02-2024	3	Invasions and metastasis, patterns of spread, disturbances of growth of cells	PO1,3,4,9	Chalk and Board
	15	12-02-2024 13-02-2024 14-02-2024 16-02-2024	4	Classification of tumors, general biology of tumors, spread of malignant tumors	PO1,3,9,11	Chalk and Board
	16	19-02-2024 20-02-2024 21-02-2024	3	Etiology and pathogenesis of cancer	PO1,3,9,11	Chalk and Board

UNIT 5 SHOCK

5	17	1-03-2024 19-03-2024	2	Types of shock, mechanisms	PO1,4	PPT
	18	16-04-2024 20-04-2024	2	Stages and management	PO1,3,4,9	Digital Board

UNIT 6 BIOLOGICAL EFFECTS OF RADIATION

6	19	20-03-2024	2	Biological effects of radiation	PO1,4	Chalk and Board
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UNIT 7 ENVIRONMENTAL AND NUTRITIONAL DISEASES

7	20	26-04-2024	1	Air pollution and smoking- SO ₂ ,NO, NO ₂ , and CO	PO1,4	Chalk and Board
	21	30-04-2024 01-05-2024 03-05-2024	3	Protein calorie malnutrition, vitamins, obesity, pathogenesis of starvation	PO1,4	Chalk and Board
UNIT 8 PATHOPHYSIOLOGY OF COMMON DISEASES						
8	22	06-05-2024	1	Parkinsonism	PO 1 ,3, 4, 9,11	PPT
	23	07-05-2024	1	Schizophrenia	PO 1 ,3, 4, 9,11	PPT
	24	08-05-2024	1	Depression and mania	PO 1 ,3, 4, 9,11	PPT
	25	10-05-2024	1	. Hypertension	PO 1 ,3, 4, 9,11	PPT
	26	10-05-2024	1	Stroke (ischemia and hemorrhage)	PO 1 ,3, 4, 9,11	PPT
	27	15-05-2024 07-06-2024 11-06-2024 12-06-2024	4	Angina, CCF, Atherosclerosis, Myocardial infarction	PO 1 ,3, 4, 9,11	PPT
	28	14-06-2024 15-06-2024	2	. Diabetes Mellitus	PO 1 ,3, 4, 9,11	Chalk and Board
	29	19-06-2024	2	Peptic ulcer and inflammatory bowel diseases	PO 1 ,3, 4, 9,11	Chalk and Board
	30	21-06-2024	2	Cirrhosis and Alcoholic liver diseases	PO 1 ,3, 4, 9,11	Chalk and Board

		25-06-2024				
	31	25-06-2024 26-06-2024	2	Acute and chronic renal failure	PO 1 ,3, 4, 9,11	Chalk and Board
	32	28-06-2024	2	Asthma and chronic obstructive airway diseases	PO 1 ,3, 4, 9,11	Chalk and Board
UNIT 9 INFECTIOUS DISEASES						
9	33	01-07-2024	1	Sexually transmitted diseases (HIV,Syphilis,Gonorrhoea)	PO 1 ,3, 4, 9,11	Chalk and Board
	34	03-07-2024	1	Urinary tract infections	PO 1 ,3, 4, 9,11	Chalk and Board
	35	05-07-2024	1	Pneumonia	PO 1 ,3, 4, 9,11	Chalk and Board
	36	06-07-2024	1	Typhoid	PO 1 ,3, 4, 9,11	Chalk and Board
	37	09-07-2024	1	Tuberculosis	PO 1 ,3, 4, 9,11	Chalk and Board
	38	09-07-2024	1	Leprosy	PO 1 ,3, 4, 9,11	Chalk and Board
	39	10-07-2024	1	Malaria Dysentery (bacterial and amoebic)	PO 1 ,3, 4, 9,11	Chalk and Board
	40	16-07-2024	1	Hepatitis- infective hepatitis	PO 1 ,3, 4, 9,11	Chalk and Board

RBVRR Women's College of Pharmacy

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Barkatpura, Hyderabad – 500 027.

COURSE PLAN (2023-24)

COURSE SCHEDULE

Academic year: **2023-2024**
Name of the program: **Pharm D II Year**
Name of the subject: **Pathophysiology (Theory)**

Name of the faculty: **Dr. Fatima Khader Unisa**
Designation: **Assistant professor**
Department: **Pharmacy Practice**

COURSE OBJECTIVES:

- 1. Describe the basic concepts of reversible-irreversible cell injury: their mechanisms, morphology and cellular adaptations: atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia.**
- 2. Define and describe the general features of acute and chronic inflammation including stimuli, vascular and cellular events**
- 3. Describe the process of repair and regeneration including wound healing and its types.**
- 4. Discuss the basic functions of the immune system and describe specific types of immune system diseases. Describe the HLA system and the immune principles involved in transplant and mechanism of transplant rejection**
- 5. Illustrate various mechanisms that regulate Type I, II, III & IV hypersensitivity reactions.**
- 6. Enumerate carcinogens and explain the process of carcinogenesis; compare and contrast benign and malignant neoplasms.**
- 7. Describe the etipathogenesis, clinical manifestations, and management of various states of shock.**
- 8. Describe the pathogenesis of disorders caused by air pollution, tobacco, alcohol, protein calorie malnutrition and starvation.**
- 9. Discuss the etiology, pathogenesis, complications, and clinical significance of selected disorders of the nervous, endocrine, cardiovascular, gastrointestinal, urinary and respiratory system.**
- 10. Discuss the causative agents ,risk factors, etiology, pathophysiology, clinical manifestations, and diagnostic tests related to infectious diseases**

Text Books referred:

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Textbook of Pathology- Y.M. Bhide

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2	3	20-11-2023 21-11-2023 22-11-2023 24-11-2023	4	Pathogenesis of acute inflammation	PO1,2,3,11	Digital Board
	4	28-11-2023 29-11-2023 01-12-2023 04-12-2023 05-12-2023	5	Chemical mediators in inflammation	PO1,2,3,11	Digital Board

	5	06-12-2023 08-12-2023 15-12-2023 18-12-2023 19-12-2023	5	Types of chronic inflammation	PO1,2,3,11	Digital Board
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3	6	20-12-2023 22-12-2023	2	Introduction to Tand B cells	PO1,3,4	Digital Board
	7	27-12-2023	1	MHC proteins or transplantation antigens	PO1,2,3,11	Chalk and Board
	8	29-12-2023 30-12-2023 2-01-2024 03-01-2024 04-01-2024 05-01-2024	6	Immune tolerance - Hypersensitivity, Hypersensitivity type I, II, III, IV	PO1,2,3,11	Chalk and Board
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	11	24-01-2024 29-01-2024	2	Acquired immune deficiency syndrome (AIDS)	PO1,2,3,11	Chalk and Board
	12	30-01-2024	1	Amyloidosis	PO1,2,3,11	Chalk and Board

UNIT 4 CANCER

4	13	31-01-2024 02-02-2024 05-02-2024	3	Differences between benign and malignant tumors, Histological diagnosis of malignancy	PO1,3,9,11,	Chalk and Board
	14	06-02-2024 07-02-2024 09-02-2024	3	Invasions and metastasis, patterns of spread, disturbances of growth of cells	PO1,3,4,9	Chalk and Board
	15	12-02-2024 13-02-2024 14-02-2024 16-02-2024	4	Classification of tumors, general biology of tumors, spread of malignant tumors	PO1,3,9,11	Chalk and Board
	16	19-02-2024 20-02-2024 21-02-2024	3	Etiology and pathogenesis of cancer	PO1,3,9,11	Chalk and Board

UNIT 5 SHOCK

5	17	1-03-2024 19-03-2024	2	Types of shock, mechanisms	PO1,4	PPT
	18	16-04-2024 20-04-2024	2	Stages and management	PO1,3,4,9	Digital Board

UNIT 6 BIOLOGICAL EFFECTS OF RADIATION

6	19	20-03-2024	2	Biological effects of radiation	PO1,4	Chalk and Board
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UNIT 7 ENVIRONMENTAL AND NUTRITIONAL DISEASES

7	20	26-04-2024	1	Air pollution and smoking- SO ₂ ,NO, NO ₂ , and CO	PO1,4	Chalk and Board
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	24	08-05-2024	1	Depression and mania	PO 1 ,3, 4, 9,11	PPT
	25	10-05-2024	1	. Hypertension	PO 1 ,3, 4, 9,11	PPT
	26	10-05-2024	1	Stroke (ischemia and hemorrhage)	PO 1 ,3, 4, 9,11	PPT
	27	15-05-2024 07-06-2024 11-06-2024 12-06-2024	4	Angina, CCF, Atherosclerosis, Myocardial infarction	PO 1 ,3, 4, 9,11	PPT
	28	14-06-2024 15-06-2024	2	. Diabetes Mellitus	PO 1 ,3, 4, 9,11	Chalk and Board
	29	19-06-2024	2	Peptic ulcer and inflammatory bowel diseases	PO 1 ,3, 4, 9,11	Chalk and Board
	30	21-06-2024	2	Cirrhosis and Alcoholic liver diseases	PO 1 ,3, 4, 9,11	Chalk and Board

		25-06-2024				
	31	25-06-2024 26-06-2024	2	Acute and chronic renal failure	PO 1 ,3, 4, 9,11	Chalk and Board
	32	28-06-2024	2	Asthma and chronic obstructive airway diseases	PO 1 ,3, 4, 9,11	Chalk and Board
UNIT 9 INFECTIOUS DISEASES						
9	33	01-07-2024	1	Sexually transmitted diseases (HIV,Syphilis,Gonorrhoea)	PO 1 ,3, 4, 9,11	Chalk and Board
	34	03-07-2024	1	Urinary tract infections	PO 1 ,3, 4, 9,11	Chalk and Board
	35	05-07-2024	1	Pneumonia	PO 1 ,3, 4, 9,11	Chalk and Board
	36	06-07-2024	1	Typhoid	PO 1 ,3, 4, 9,11	Chalk and Board
	37	09-07-2024	1	Tuberculosis	PO 1 ,3, 4, 9,11	Chalk and Board
	38	09-07-2024	1	Leprosy	PO 1 ,3, 4, 9,11	Chalk and Board
	39	10-07-2024	1	Malaria Dysentery (bacterial and amoebic)	PO 1 ,3, 4, 9,11	Chalk and Board
	40	16-07-2024	1	Hepatitis- infective hepatitis	PO 1 ,3, 4, 9,11	Chalk and Board

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Barkatpura, Hyderabad – 500 027.

COURSE PLAN (2023-24)

COURSE SCHEDULE

Academic year: **2023-2024**

Name of the program: **Pharm D III Year**

Name of the subject: **3.3 Pharmacotherapeutics-II (Theory and Practical)**

Name of the faculty: **Dr. Fatima Khader Unisa**

Designation: **Assistant professor**

Department: **Pharmacy Practice**

COURSE OBJECTIVES

- 1: Understands the etiopathogenesis of selected disease state**
- 2: Elucidate the importance of guidelines for the rational use of antibiotics and surgical prophylaxis**
- 3: Discuss in detail about different infectious diseases with its types and rationale for drug therapy**
- 4: Interpret the clinical manifestations of selected disease states**
- 5: Discuss the role of diagnosis in evaluating the disease status and illustration of different classes of drugs used**
- 6: Discuss the therapeutic approach for the management of selected disease states with controversies in drug therapy**
- 7: Explain about the basic principles of cancer therapy, its chemotherapeutic agents with special reference to breast cancer and leukemia**
- 8: Describe in detail about chemotherapy induced Nausea & vomiting**
- 9: Illustrate different dermatological disorders with its types and treatment**
- 10: Illustrate the Algorithm for the management of selected disease states**

Text Books referred:

Clinical Pharmacy and Therapeutics - Roger and Walker, Churchill Livingstone publication

Pharmacotherapy: A Pathophysiologic approach - Joseph T. Dipiro et al. Appleton & Lange

Pathologic basis of disease - Robins SL, W.B.Saunders publication

Pathology and therapeutics for Pharmacists: A Basis for Clinical Pharmacy Practice - Green and Harris, Chapman and Hall publication

Clinical Pharmacy and Therapeutics - Eric T. Herfindal, Williams and Wilkins Publication

Applied Therapeutics: The clinical Use of Drugs. Lloyd Young and Koda-Kimble MA

Avery's Drug Treatment, 4th Edn, 1997, Adis International Limited.

Illustrated Synopsis of Dermatology and Sexually Transmitted Diseases Fourth Edition, Neena Khanna, MD, Elsevier

Current Medical Diagnosis & Treatment 2022, 61 Edition. Maxine A. Papadakis, Stephen J. McPhee, Michael W. Rabow, Kenneth R. McQuaid, McGraw Hill.

Relevant review articles from recent medical and pharmaceutical literature.

Course Schedule for the whole course/ Subject is:

Unit No	No of Lesson	Date of Lecture	No. of Periods	Name of Topic	POs	Mode of Teaching
UNIT 1 INFECTIOUS DISEASE						
1	1	30-10 2023 01-11-2023 02-11-2023	3	Guidelines for the rational use of antibiotics	PO1,3,4	Digital Board
	2	02-11-2023 08-11-2023 15-11-2023	3	Surgical Prophylaxis	PO1,3,4,9	Digital Board
	3	16-11-2023	1	Tuberculosis (Definition, etiology and epidemiology)	PO1,3,4,11	Digital Board
	4	18-11-2023	1	Tuberculosis (Pathophysiology and diagnosis)	PO1,3,4,9	Digital Board
	5	24-11-2023	1	Tuberculosis (Treatment)	PO1,4,11	Digital Board
	6	25-11-2023	2	Tuberculosis (Management)	PO1,3,9,11	Digital Board
	7	02-12-2023	1	Meningitis (Definition, etiology and epidemiology)	PO1,4,9	Digital Board
	8	04-12-2023	1	Meningitis (Pathophysiology and diagnosis)	PO1,3,4,9	Digital Board
	9	07-12-2023	1	Meningitis (Management)	PO1,3,4	Digital Board

10	11-12-2023	1	Respiratory tract infections	PO1,3,4,9,	Digital Board
11	16-12-2023	1	Respiratory tract infections	PO1,3,4,9	Digital Board
12	18-12-2023 19-12-2023	2	Gastroenteritis	PO1,3,4,9	Digital Board
13	03-01-2024	1	Endocarditis (Definition, etiology and epidemiology, pathophysiology)	PO1,3,4,9	Digital Board
14	20-01-2024	1	Endocarditis (TREATMENT)	PO1,3,4,9	Digital Board
15	01-02-2024	1	Septicemia (Definition, etiology and epidemiology, pathophysiology)	PO1,3,4,9	Digital Board
16	03-02-2024	1	Septicemia (Treatment)	PO1,3,4,9	Digital Board
17	20-03-2024	1	Urinary tract infections (Definition, etiology and epidemiology)	PO1,3,4,9	Chalk and Board
18	21-03-2024	1	Urinary tract infections (pathophysiology, diagnosis)	PO1,3,4,9	Chalk and Board
19	15-04-2024	1	Urinary tract infections (Treatment)	PO1,3,4,9	Chalk and Board
20	15-04-2024	1	Protozoal infection- Malaria	PO1,3,4,9	Chalk and Board
21	22-04-2024 24-04-2024 25-04-2024	3	HIV & Opportunistic infections	PO1,3,4,9	Chalk and Board
22	07-05-2024 08-05-2024 09-05-2024	3	Fungal infections- Superficial fungal infections	PO1,3,4,9	Chalk and Board

	23	10-06-2024 12-06-2024	4	Fungal infections- invasive fungal infections	PO1,3,4,9	Chalk and Board
	24	29-04-2024 01-05-2024	2	Viral infections	PO1,3,4,9	Chalk and Board
	25	29-04-2024	1	Gonorrhoea	PO1,3,4,9	Chalk and Board
	26	25-04-2024	1	Syphilis	PO1,3,4,9	Chalk and Board
UNIT 2- MUSCULOSKELETAL DISORDERS						
2	27	10-06-2024	1	Rheumatoid arthritis (Introduction, etiology, epidemiology, pathophysiology)	PO1,3,9,11	Chalk and Board
	28	21-06-2024	1	Rheumatoid arthritis (Diagnosis, Management)	PO1,3,9,11,	Chalk and Board
	29	24-06-2024	1	Osteoarthritis (Introduction, etiology, epidemiology, pathophysiology)	PO1,3,4,9	Chalk and Board
	30	24-06-2024	1	Osteoarthritis (Diagnosis, Management)	PO1,3,9,11	Chalk and Board
	31	26-06-2024	1	Gout (Introduction, etiology, epidemiology, pathophysiology)	PO1,3,9,11	Chalk and Board
	32	27-06-2024	1	Gout (Diagnosis, Management)	PO1,3,4,9	Chalk and Board
	33	01-07-2024	2	Spondylitis	PO1,4	PPT
	34	03-07-2024	1	Systemic lupus erythematosus.	PO1,3,4,9	Digital Board
UNIT 3 RENAL SYSTEM						
	35	17-02-2024	1	Acute Renal Failure (Definition, classification, etiology, risk factor)	PO1,3,4,9	Digital Board

	36	21-02-2024	1	Acute Renal Failure (Pathophysiology, clinical features)	PO1,3,4,9	Chalk and Board
	37	24-02-2024 24-02-2024	2	Acute Renal Failure (Management)	PO1,3,9,11	Chalk and Board
	38	26-02-2024	1	Chronic Renal Failure(Definition, classification, etiology)	PO1,3,9,11	Chalk and Board
	39	29-02-2024	1	Chronic Renal Failure (pathophysiology, diagnosis)	PO1,3,9,11	Chalk and Board
	40	11-03-2024 13-03-2024	2	Chronic Renal Failure (management, anemia and bone disorders)	PO1,3,9,11	Chalk and Board
	41	14-03-2024	1	Renal Dialysis	PO1,3,9,11	Chalk and Board
	42	16-03-2024 18-03-2024	3	Drug induced renal disorders	PO1,3,9,11	Chalk and Board
UNIT 4 ONCOLOGY						
4	45	08-07-2024	1	Basic principles of Cancer therapy	PO1,3,9,11	Chalk and Board
	46	08-07-2024	1	General introduction to cancer chemotherapeutic agents	PO1,3,9,11	Chalk and Board
	47	15-07-2024	1	Chemotherapy of breast cancer (introduction, epidemiology, etiology, risk factors)	PO1,3,9	PPT
	48	15-07-2024	1	Chemotherapy of breast cancer (pathophysiology, staging, clinical presentation)	PO1,3,9	PPT
	49	22-07-2024	1	Chemotherapy of breast cancer (regimen)	PO1,3,9	PPT

	50	22-07-2024	1	Chemotherapy of leukemia (introduction, epidemiology, etiology, risk factors)	PO1,3,9	PPT
	51	24-07-2024	1	Chemotherapy of leukemia (pathophysiology, staging, clinical presentation)	PO1,3,9	PPT
	52	25-07-2024	2	Chemotherapy of leukemia (regimen)	PO1,3,9	PPT
	53	11-07-2024	1	Management of chemotherapy nausea and emesis	PO1,3,9	PPT
UNIT 5 DERMATOLOGY						
5	54	24-01-2024	1	Psoriasis (Introduction, etiology, epidemiology)	PO1,3,9,11	Digital Board
	55	25-01-2024	1	Psoriasis (Etiopathogenesis, clinical features, types, diagnosis)	PO1,3,9,11	Digital Board
	56	27-01-2024 29-01-2024 31-01-2024 07-02-2024	4	Psoriasis (Management)	PO1,3,9,11	Digital Board
	57	10-02-2024	1	Scabies	PO1,3,9,11	Digital Board
	58	12-02-2024	1	Eczema	PO1,3,9,11	Digital Board
	59	14-02-2024	1	Impetigo	PO1,3,9,11	Digital Board

RBVRR Women's College of Pharmacy

(Approved by AICTE & PCI, Affiliated to Osmania University)

Barkatpura, Hyderabad – 500 027

Academic year: 2023-24

Name of the program: M. Pharm

Year:I Semester: I

Name of the subject: Regulatory affairs

Course code: MPH 104T

Name of the faculty: Dr. G.UmaRani

Designation: Associate Professor

Department: Pharmaceutics

Textbooks Referred:

T1. Generic Drug Product Development, Solid Oral Dosage forms, Leon Shargel and IsaderKaufer,Marcel Dekker series, Vol.143

T2. The Pharmaceutical Regulatory Process, Second Edition Edited by Ira R. Berry and Robert P.Martin, Drugs and the Pharmaceutical Sciences,Vol.185, Informa Health care Publishers.

T3. New Drug Approval Process: Accelerating Global Registrations By Richard A Guarino, MD,5th edition, Drugs and the Pharmaceutical Sciences,Vol.190.

T4. Guidebook for drug regulatory submissions / Sandy Weinberg. By John Wiley & Sons.Inc.

Course schedule for the whole Course / Subject is:

S No.	Description	Duration		Number of periods
		From	To	
1	UNIT I	28.10.2023	22.11.2023	12
2	UNIT II	24.11.2023	16.12.2023	12
3	UNIT III	18.12.2023	19.01.2024	12
4	UNIT IV	29.01.2024	02.02.2024	12
5	UNIT V	03.02.2024	19.02.2024	12

UNIT	LESSON NO	DATE	NO of Classes	NAME OF THE TOPIC	PO/C0	MODE OF TEACHING
UNIT I	1.	28.102023	1	Documentation in Pharmaceutical industry: Master formula record, DMF (Drug Master File), distribution records. Generic drugs product development Introduction	1,2,11/1	Ppt
		30.102023	1			
01.11.2023		1				
06.11.2023		1				
	2.	08.11.2023	1	Hatch-Waxman act and amendments		
			1			

		10.11.2023 15.11.2023	1 1	, CFR (CODE OF FEDERAL REGULATION) , drug product performance, in-vitro, ANDA regulatory approval process,		
	3.	17.11.2023 18.11.2023	1 1	NDA approval process, BE and drug product assessment, in vivo,		
	4.	20.11.2023 22.11.2023	1 1	scale up process approval changes, post marketing surveillance, outsourcing BA and BE to CRO.	1,2,7,11/2	Ppt
	Unit II	25.11.2023 01.12.2023 02.12.2023 04.12.2023 04.12.2023 06.12.2023 06.12.2023 13.12.2023 15.12.2023 16.12.2023	1 1 1 1 1 1 1 1 1 1	Regulatory requirement for approval of novel therapies biologics therapies Regulatory requirement for approval of novel therapies NDA Regulatory requirement for approval of novel therapies ANDA Regulatory requirement for approval of novel therapies Generic drugs US registration for foreign drugs		
UNIT III	5.	18.12.2023 20.12.2023 22.12.2023	1 1 1	CMC Post approval changes and regulatory affairs Regulation of combination products	1,2,7,11/2	Chalk and ppt

	6.	23.12.2023 03.01.2024	1 1 1	CTD and eCTD formats Industry FDA Liaison Seminars	1,2,3, 11/3	Chalk and PPT
	7.	05.01.2024 06.01.2024 08.01.2024	1 1 1	ICH Steering committee Q guidelines,E guidelines M,S guidelines		
	8.	10.01.2024	1	Regulatory requirement for EU and MHRA		
	9.	12.01.2024 12.01.2024 17.01.2024	1 1 1	Regulatory requirement for TGA Regulatory requirement for ROW countries		
					1,2,3,11/4	Chalk and PPT
UNIT IV	10.	19.01.2024 19.01.2024 20.01.2024	1 1 1	Global submission of IND Global submission of NDA Global submission of ANDA	1,2,3,11/4	Chalk and PPT
	11.	22.01.2024 24.01.2024 27.01.2024 29.01.2024	1 1 1 1	Investigation of medicinal products dossier, dossier (IMPD) investigator brochure (IB) IB contents and description		
UNIT V	12.	02.02.2024 02.02.2024 03.02.2024	1 1 1	Phase I and II Clinical trails Phase III and IV Clinical trails Development of Clinical trail protocol	1,2,3,8,11 /5	Chalk and PPT
	13.	05.02.2024 07.02.2024	1 1	Development of Institutional review board Informed consent process		
	14.	09.02.2024 10.02.2024 12.02.2024	1	Development of protocols and establishing procedures for clinical trials		

	15.	14.02.2024 s	1 1	HIPAA-New requirement to clinical study process		
	16.	17.02.2024 19.02.2024	1 1	Pharmacovigilance safety monitoring in clinical trials.		