

Republic of Yemen

Ministry of Higher Education & Scientific Research

21 SEPTEMBER UNIVERSITY of MEDICALS & APPLIED SCIENCES



Faculty of Medicine

Bachelor Program of Medicine and Surgery

Course Specification of

Gastrointestinal system

Course Code. (A21P312)

2023



T4: This Template is Developed and Approved by CAQA-Yemen, 2023

Prepared by:	Reviewed by:	Head of department	Quality Unit:	Dean of Medicine Faculty	Center of Development and Quality Assurance Dean
Dr. Ahmed Hudna	Dr. Asma Alhinhna		Dr. Fadhl Shujaa Al-deen	Dr. Salwa Al-Ghomeri	

I. General Information:

1.	Course Title:	Gastrointestinal system				
2.	Course Code:	A21P312				
3.	Credit Hours:	Credit Hours	Theory Contact Hours		Practical Contact Hours	
			Lecture	Tutorial/ Seminar	Lab	Clinical
		8	6	--	4	--
4.	Level/ Semester at which this Course is offered:	3 rd Level / 1 st Semester				
5.	Pre –Requisite (if any):	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology.				
6.	Co –Requisite (if any):	None				
7.	Program (s) in which the Course is Offered:	Bachelor of Medicine and surgery				
8.	Language of Teaching the Course:	English				
9.	Location of Teaching the Course:	Faculty of Medicine				
10.	Prepared by:	Dr. Ahmed Hudna				
11.	Date and Number of Approval by Council:	2023				

II. Course Description:

Gastrointestinal and hepatobiliary system block is an integrated based system aims to provide a sufficient information about the normal gastrointestinal tract and the hepatobiliary system and their disorders, it will cover the normal structure and function, the most common diseases and their

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etiology, clinical presentation, diagnosis and treatment. It will be studied by a complimentary method of learning: simultaneous lectures and practical lessons of anatomy, histology, physiology and the pathology, etiology, pediatric, medical, surgical, pharmacological aspects of the most common diseases.

III. Course Intended Learning Outcomes (CILOs) : Upon successful completion of the course, students will be able to:		Referenced PILOs	
A. Knowledge and Understanding:		I, P or M/A	
a1	Describe the structure and the function of the gastrointestinal and hepatobiliary system on the molecular, cellular and biochemical level to achieve the normal digestive function	I	A1 Describe the general and basic sciences related to human body structure and functions with emphasis on normal and abnormal conditions.
a2	Describe the pharmacological proprieties of drugs related to the gastrointestinal and hepatobiliary disorders and their personal and society effects.	A	A3 Explain the pathological and pathogenesis changes in various diseases, and their etiological triggers including genetic, developmental, infectious, metabolic, endocrinal, autoimmune, neoplastic, traumatic, degenerative and occupational factors.
B. Intellectual Skills:			
b1	Distinguish between physiological and pathological performance of body cells.	I	B1 Compare between normal and abnormal conditions and predict the appropriate treatment or intervention.
b2	Distinguish between various gastrointestinal and hepatobiliary diseases using the patient's medical history, clinical manifestations and	P	B2 Analyze and interpret the finding from history, clinical examination and investigations to propose a diagnosis and develop a shared management plan for common

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	laboratory/radiologic findings.			acute, chronic and urgent physical and mental health presentations.
C. Professional and Practical Skills:				
c1	Perform history taking, physical/clinical examinations, and correct laboratory and radiologic investigation requests and interpretations to diagnose gastrointestinal and hepatobiliary diseases.	P	C1	Perform complete clinical examination and precise investigations to reach the final diagnosis.
c2	Prescribe appropriate, safe and affordable drugs for initial treatment of patients with gastrointestinal and hepatobiliary diseases.	A	C3	Carry out routine medical procedure and demonstrate the ability of using common medical tools required for diagnosis and management with highly qualified competency.
D. Transferable Skills:				
d1	Use the information technology and internet resources efficiently for self-learning and gaining up-to-date information in the areas of interest.	P	D1	Communicate with professionals, patients, their families and the community through verbal, written and other non-verbal means.
d2	Act independently or collaboratively as a member of teamwork and communicate effectively with others.	A	D2	Work individually or in a team and develop lifelong learning using up to date technology that help in understanding the diseases and its control and prevention.
I= Introduced, P=Practiced or M/A= Mastered/Advanced				

(A) Alignment of Course Intended Learning Outcomes (Knowledge and Understanding) to Teaching Strategies and Assessment Methods:

Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
a1 Describe the structure and the	▪ Interactive lectures	▪ Quizzes

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	function of the gastrointestinal and hepatobiliary system on the molecular, cellular and biochemical level to achieve the normal digestive function	<ul style="list-style-type: none"> Discussion Office hours Self-learning 	<ul style="list-style-type: none"> Final written exam Oral Discussion
a2	Describe the pharmacological proprieties of drugs related to the gastrointestinal and hepatobiliary disorders and their personal and society effects.	<ul style="list-style-type: none"> Interactive lectures Discussion Case studies Office hours Self learning 	<ul style="list-style-type: none"> Quizzes Final written exam Oral Discussion
(B) Alignment of Course Intended Learning Outcomes (Intellectual Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
b1	Distinguish between physiological and pathological performance of body cells.	<ul style="list-style-type: none"> Interactive lectures Seminars Discussion Case studies 	<ul style="list-style-type: none"> Final written exam Final practical exam Oral Discussion
b2	Distinguish between various gastrointestinal and hepatobiliary diseases using the patient's medical history, clinical manifestations and laboratory/radiologic findings.	<ul style="list-style-type: none"> Interactive lectures Seminars Discussion Case studies 	<ul style="list-style-type: none"> Final written exam Final practical exam Oral Discussion
(C) Alignment of Course Intended Learning Outcomes (Professional and Practical Skills) to Teaching Strategies and Assessment Methods:			
Course Intended Learning Outcomes		Teaching Strategies	Assessment Strategies
c1	Perform history taking, physical/clinical examinations, and correct laboratory and radiologic investigation requests and interpretations to diagnose gastrointestinal and hepatobiliary diseases.	<ul style="list-style-type: none"> Lab experiments Case studies PBL 10% 	<ul style="list-style-type: none"> Final practical exam OSPE
c2	Prescribe appropriate, safe and	<ul style="list-style-type: none"> Lab experiments 	<ul style="list-style-type: none"> Final practical exam

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	affordable drugs for initial treatment of patients with gastrointestinal and hepatobiliary diseases.	<ul style="list-style-type: none"> Case studies PBL 10% 	<ul style="list-style-type: none"> OSPE
(D) Alignment of Course Intended Learning Outcomes (Transferable Skills) to Teaching Strategies and Assessment Methods:			
	Course Intended Learning Outcomes	Teaching Strategies	Assessment Strategies
d1	Use the information technology and internet resources efficiently for self-learning and gaining up-to-date information in the areas of interest.	<ul style="list-style-type: none"> Seminars Discussion Case studies Self-learning 	<ul style="list-style-type: none"> Oral discussion Homework Teamwork
d2	Act independently or collaboratively as a member of teamwork and communicate effectively with others.	<ul style="list-style-type: none"> Seminars Discussion Case studies Self-learning 	<ul style="list-style-type: none"> Oral discussion Homework Teamwork

IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
1	Anatomy	Embryology of GIT		2	a1
		Mouth -oesophagus		1	
		Stomach		2	
		Pancreas.		2	
		Duodenum.		2	
		Small intestine and its mesentery		2	
		Caecum and appendix		2	
		A T D colon.		1	
		Pelvic colon.		1	
		Rectum, Anal canal and Perineum		2	
		Spleen		1	

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No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
		Blood supply of the GIT		1	
		Aorta and its branches.		2	
		Inferior vena cava and its tributaries.		1	
		Autonomic supply and segmental innervations		1	
		Lymph drainage		1	
		Surface, radiological and clinical anatomy		1	
		Anterior abdominal wall.		1	
		Inguinal canal and rectus sheath. Hernia.		1	
	Total			24	
2	Physiology	Principles of gastrointestinal function, motility, nervous, and hormonal control & blood circulation		4	a1
		Mastication and swallowing Salivary secretion.		2	
		Stomach, functions, regulation of emptying, control of secretions, motility, and vomiting		4	
		Intestinal motility and Defecation		2	
	Total			12	
3	Histology	Oral cavity, salivary glands & Esophagus.		2	a1
		Stomach & Small intestine		2	
		Appendix, Colon & Anal canal		2	
	Total			6	
4	Pathology	Oral pathology: Inflammatory diseases. Leukoplakia & neoplastic conditions. Salivary gland lesions. Oral manifestations of systemic diseases		4	a1, a2
		Esophageal disorders: Congenital & common acquired		4	

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No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
		<p>conditions. Achalasia. Esophagitis. Esophageal carcinoma.</p> <p>Gastric pathology: Gastritis (acute & chronic). Peptic ulcer diseases (Etiology & risk factors, morphological changes). Gastric tumors. Hypertrophic gastropathy.</p> <p>Intestinal disorders: Congenital anomalies. Infectious enterocolitis (Types & Pathogenesis). Acute appendicitis. Inflammatory bowel diseases (Crohn's disease & ulcerative colitis): Definition, etiology, pathogenesis & pathological changes. Malabsorption syndrome: Definition and classification. (Celiac disease: Pathogenesis & morphological changes). Diverticular diseases. Vascular diseases. Intestinal neoplasms: Adenoma, familial polyposis coli, colonic adenocarcinoma, carcinoid tumor & lymphoma.</p>		4	
				4	
	Total			16	
5	Microbiology	<p>Definition, pathogenesis & Laboratory diagnosis of:</p> <p>Bacterial Diarrhea: E. coli, Shigella, Campylobacter jejuni, Yersinia, enterocolitica Vibrio cholera, CL. Difficile (Antibiotic associated Diarrhea).</p> <p>Viral Diarrhea: Rota virus, Astroviruses, Calciviruses.</p>		2	a1, a2
				2	

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No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)	
		Adenoviruses, Norwalk viruses. Echoviruses.				
		Systemic Infection initiated in the gastrointestinal: - Enteric fever (Salmonella typhi and paratyphi) - Listeriosis		1		
		Microorganisms causing food poisoning: Staph. Aureus, Closteridium botulinum, Bacillus cereus, Vibrio parahaemolyticus, Brucellosis.		1		
		Gastric ulcer disease: Helicobacter pylori		1		
		Parasite infection: Giardia lamblia Heterophytes Heterophytes		1		
		Ascaris lumbricoides, Trichuris trichura Pin worms		1		
		Taenia saginata, T. Solium Hymenolepis nana		1		
		Hook worms & Strongyloides stercoralis		1		
	Total			11		
6	Pharmacology	Antiemetic agents.		2	a2, b2	
		GI secretion & treatment of peptic ulcer.		1		
		Laxatives. Antidiarrheal agents.		1		
		Drugs used in Inflammatory bowel disease (IBD).		2		
		Antiamoebiasis, Antigiardiasis. & Anthelmintic agents.		2		
	Total			8		
7	Medicine	Clinical picture, diagnosis, treatment & prognosis of:			2	a2, b1,
		GERD				

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No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)	
		Peptic ulcer		2	b2, d1, d2	
		Malabsorption syndromes		2		
		Inflammatory Bowel Diseases		2		
		Irritable Bowel Syndrome		2		
	Total			10		
8	Pediatrics	Clinical picture, diagnosis, treatment & prognosis of:				a2, b1, b2, d1, d2
		Congenital malformations: TEF, Hypertrophic pyloric stenosis & Duodenal atresia		2		
		Stomatitis-glossitis		2		
		Acute Diarrhea & dehydration in childhood		2		
		Chronic Diarrhea in childhood (celiac dis, lactose intolerance & Cystic Fibrosis)		2		
	Total			8		
9	Surgery	Clinical picture, diagnosis, treatment & prognosis of:				a2, b1, b2, d1, d2
		Gastrointestinal bleeding: Hematemesis, Fissures, Hemorrhoids		2		
		Dysphagia & achalasia		1		
		Carcinoma of esophagus		1		
		Acute abdomen & Acute Appendicitis		2		
		Intestinal obstruction		1		
		Gastrointestinal tumors		1		
	Total			8		
	TOTAL			103		
10	Anatomy	Liver	7	2	a1	
		Biliary tract and gallbladder		2		
		Portal vein		2		
		Portal circulation & bile circulation		2		
		Peritoneum. Posterior abdominal wall and lumbar plexus		2		

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No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
	Total			8	
11	Physiology	Basic principles of gastrointestinal absorption.	7	2	a1
		Function of Liver and biliary system		2	
		Function of biliary system		2	
		Hepatic circulation		2	
		Exocrine function of Pancreas		2	
	Total			10	
12	Bio-chemistry	Digestive juices	7	2	a1
		Carbohydrates digestion and absorption.		2	
		Lipids digestion and absorption.		2	
		Proteins digestion and absorption.		2	
		Nucleic acids digestion and absorption.		2	
		Vitamins and minerals absorption.		2	
		Liver function tests.		2	
	Total			14	
13	Histology	Histology of the liver	7	2	a1
		Histology of the biliary tree		2	
		Histology of pancreas		2	
	Total			6	
14	Pathology	Pathophysiology of jaundice.		1	a1, a2
		Hepatic failure.		1	
		Cirrhosis: Etiology, pathogenesis, morphology & clinical effects.		1	
		Viral hepatitis: types, clinicopathologic syndromes.		1	
		Drug-induced liver diseases.		1	
		Neonatal cholestasis.		1	
		Gall stones & cholecystitis (types, pathogenesis & morphology)	7	1	
		Pancreatitis (types, pathogenesis & morphology)		1	

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No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)	
	Total			8		
15	Microbiology	Definition, pathogenesis & Laboratory diagnosis				a1, a2
		Hepatitis A, B, C, D, E, G	7	2		
		Entamoeba species (Histolytica) Hydatid cyst (Echinococcus granulossus).		2		
		Schistosoma mansoni, Fasciola hepatica		2		
	Total			6		
16	Pharmacology	Drugs used in some liver diseases & Gallstones.	7	2	a2, b2	
		Antiviral drugs		2		
	Total			4		
17	Medicine	Clinical picture, diagnosis, treatment & prognosis of:				a2, b1, b2, d1, d2
		Jaundice	7	1		
		Viral Hepatitis		1		
		Acute hepatic failure & Liver cirrhosis		1		
		Portal hypertension & ascites		1		
	Total			4		
18	Pediatrics	Clinical picture, diagnosis, treatment & prognosis of:				a2, b1, b2, d1, d2
		Viral Hepatitis in childhood (virus A)		2		
		Neonatal jaundice.	7	2		
	Total			4		
19	Surgery	Clinical picture, diagnosis, treatment & prognosis of:				a2, b1, b2, d1, d2
		Liver abscess: pyogenic & amebic	7	1		
		Hepatic tumors		1		
		Cholecystitis (Acute & chronic)		1		
		Gall stones		1		
		Obstructive jaundice		1		
		Acute pancreatitis		1		
Pancreatic tumors		1				

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No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours	Learning Outcomes (CILOs)
	Total			7	
	TOTAL			71	
	Final Theoretical Exam		7 th		a1,a2, b1, b2
Number of Weeks /and Units Per Semester			7	168	

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Week Due	Contact Hours	Learning Outcomes (CILOs)
1	-spleen Stomach Pancreas Duodenum Small intestine and its mesentery Large intestine Pelvic colon. Rectum. Anal canal and Perineum Liver, portal circulation & bile circulation Biliary tract and gallbladder Portal vein Blood supply of the GIT Anterior abdominal wall.	7	14	b1, b2,c1,c2, d1,d2
2	Pathology Oral pathology: Inflammatory diseases.	7	14	b1, b2,c1,c2, d1,d2

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No.	Tasks/ Experiments	Week Due	Contact Hours	Learning Outcomes (CILOs)
	Leukoplakia & neoplastic conditions. Salivary gland lesions. Oral manifestations of systemic diseases Esophageal disorders: Gastric pathology Intestinal disorders			
3	Microbiology Bacterial Diarrhea: E. coli, Shigella, Campylobacter jejuni, Yersinia, enterocolitica Vibrio cholera, CL. Difficile (Antibiotic associated Diarrhea). Systemic Infection initiated in the gastrointestinal: - Enteric fever (Salmonella typhi and paratyphi) Microorganisms causing food poisoning Gastric ulcer disease Parasite infection	7	8	b1, b2,c1,c2, d1,d2
4	Basic clinical skills History taking and examination of a patient with gastrointestinal problem	7	10	b1, b2,c1,c2, d1,d2
5	- Final practical exam	7 th	2	b1, b2,c1,c2
Number of Weeks /and Units Per Semester		7	48	

V. Teaching Strategies of the Course:

- Interactive lectures
- Discussion

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- Case studies
- Seminars
- PBL
- Office hours
- Self-learning
- Lab experiments

VI. Assessment Methods of the Course:

- Quizzes
- Final written exam
- Final practical exam
- OSPE
- Oral discussion
- Homework

VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	Quizzes	3 rd	5	5%	a1,a2
2	Oral desiccation & Homework	5 th	15	15%	a1,a2, b1, b2, d1, d2
3	Final Practical Exam & OSPE	6 th	30	30%	b1, b2,c1,c2
4	Final Theoretical Exam	7 th	50	50%	a1,a2, b1,b2
Total			100	100%	

IX. Learning Resources:

1- Required Textbook(s):

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- 1- S Standing, 2016, Gray's Anatomy: The Anatomical Basis of Clinical Practice, 41st Edition, Elsevier.
- 2- K E Barrett, S M Barman, S Boitano, H L Brooks, 2015, Ganong's Review of Medical Physiology, 25th Edition, New York, McGraw-Hill Medical Education.
- 3- L Junqueira, J Carneiro, 2005, Basic Histology. Text and Atlas, 11th Edition, New York, McGraw-Hill Medical.
- 4- R Goering, H Dockrell, M Zuckerman, P Chiodini, 2019, Mims' Medical Microbiology and Immunology, 6th Edition, Edinburgh, Elsevier.
- 5- V Kumar, A Abas, J Aster, 2017, Robbins Basic Pathology, 10th Edition, Elsevier.
- 6- M A Clark, R Finkel, J A Rey, K Whalen, 2011, Lippincott's Illustrated Reviews: Pharmacology, 5th Edition, Philadelphia, Lippincott Williams & Wilkins.

2- Essential References:

- 1- R S Snell, 2000, Clinical Anatomy for Medical Students, 6th Edition, Washington, Little, Brown and Company.
- 2- J E Hall, 2013, Guyton and Hall Textbook of Medical Physiology, 13th Edition, Philadelphia, Saunders.
- 3- V Kumar, A Abas, J Aster, 2020, Robbins & Cotran Pathologic Basis of Disease, 9th Edition, Philadelphia, Saunders.
- 4- C Ray, K J Ryan, 2003, Sherris Medical Microbiology: An Introduction to Infectious Diseases, 4th Edition, New York, McGraw-Hill Medical Education.
- 5- B Katzung, 2017, Basic and Clinical Pharmacology, 14th Edition, New York, McGraw-Hill Medical Education.

3- Electronic Materials and Web Sites etc.:

Websites:

- 1- The Visible Body Learn Site
<https://www.visiblebody.com/learn/nervous>
- 2- Medical news today
<https://www.medicalnewstoday.com/articles/307076>

X. Course Policies: (Based on the Uniform Students' By law (2007))

Class Attendance:

- 1 Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.

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2	Tardiness: A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	Exam Attendance/Punctuality: No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	Assignments & Projects: Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	Cheating: Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	Forgery and Impersonation: Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	Other policies: The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.

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Faculty of Medicine

Bachelor Program of Medicine and Surgery

Course Plan (Syllabus) of

Gastrointestinal system

Course Code. (A21P312)

I. Information about Faculty Member Responsible for the Course:							
Name of Faculty Member:		Office Hours					
Location & Telephone No.:	----						
E-mail:	--@--.--	SAT	SUN	MON	TUE	WED	THU

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Course Code:	A21P312				
Credit Hours:	Credit Hours	Theory Contact Hours		Practical Contact Hours	
		Lecture	Tutorial/Seminar	Lab	
	8	6	--	4	-
Level/ Semester at which this Course is offered:	3rd Level / 1st Semester				
Pre –Requisite (if any):	Physiology, Biochemistry, Anatomy Histology, Pathology and Pharmacology.				
Co –Requisite (if any):	None				
Program (s) in which the Course is Offered:	Bachelor of Medicine and surgery				
Language of Teaching the Course:	English				
Location of Teaching the Course:	Faculty of Medicine				
Prepared by:	Dr. Ahmed Hudna				
11	Date and Number of Approval by Council:	2023			

III. Course Description:

Gastrointestinal and hepatobiliary system block is an integrated based system aims to provide a sufficient information about the normal gastrointestinal tract and the hepatobiliary system and

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their disorders, it will cover the normal structure and function, the most common diseases and their etiology, clinical presentation, diagnosis and treatment. It will be studied by a complimentary method of learning: simultaneous lectures and practical lessons of anatomy, histology, physiology and the pathology, etiology, pediatric, medical, surgical, pharmacological aspects of the most common diseases.

IV. Course Intended Learning Outcomes (CILOs) :

Upon successful completion of the Course, student will be able to:

	A. Knowledge and Understanding:
a1	Describe the structure and the function of the gastrointestinal and hepatobiliary system on the molecular, cellular and biochemical level to achieve the normal digestive function
a2	Describe the pharmacological proprieties of drugs related to the gastrointestinal and hepatobiliary disorders and their personal and society effects.
	B. Intellectual Skills:
b1	Distinguish between physiological and pathological performance of body cells.
b2	Distinguish between various gastrointestinal and hepatobiliary diseases using the patient's medical history, clinical manifestations and laboratory/radiologic findings.
	C. Professional and Practical Skills:
c1	Perform history taking, physical/clinical examinations, and correct laboratory and radiologic investigation requests and interpretations to diagnose gastrointestinal and hepatobiliary diseases.
c2	Prescribe appropriate, safe and affordable drugs for initial treatment of patients with gastrointestinal and hepatobiliary diseases.
	D. Transferable Skills:
d1	Use the information technology and internet resources efficiently for self-learning and gaining up-to-date information in the areas of interest.
d2	Act independently or collaboratively as a member of teamwork and communicate effectively with others.
I= Introduced, P=Practiced or M/A= Mastered/Advanced	

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IV. Course Contents:

A. Theoretical Aspect:

No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
1	Anatomy	Embryology of GIT		2
		Mouth -oesophagus		1
		Stomach		2
		Pancreas.		2
		Duodenum.		2
		Small intestine and its mesentery		2
		Caecum and appendix		2
		A T D colon.		1
		Pelvic colon.		1
		Rectum, Anal canal and Perineum		2
		Spleen		1
		Blood supply of the GIT		1
		Aorta and its branches.		2
		Inferior vena cava and its tributaries.		1
		Autonomic supply and segmental innervations		1
		Lymph drainage		1
		Surface, radiological and clinical anatomy		1
		Anterior abdominal wall.		1
Inguinal canal and rectus sheath. Hernia.		1		
	Total			24
2	Physiology	Principles of gastrointestinal function, motility, nervous, and hormonal control & blood circulation		4

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No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
		Mastication and swallowing Salivary secretion.		2
		Stomach, functions, regulation of emptying, control of secretions, motility, and vomiting		4
		Intestinal motility and Defecation		2
	Total			12
3	Histology	Oral cavity, salivary glands & Esophagus.		2
		Stomach & Small intestine		2
		Appendix, Colon & Anal canal		2
	Total			6
4	Pathology	Oral pathology: Inflammatory diseases. Leukoplakia & neoplastic conditions. Salivary gland lesions. Oral manifestations of systemic diseases		4
		Esophageal disorders: Congenital & common acquired conditions. Achalasia. Esophagitis. Esophageal carcinoma.		4
		Gastric pathology: Gastritis (acute & chronic). Peptic ulcer diseases (Etiology & risk factors, morphological changes). Gastric tumors. Hypertrophic gastropathy.		4
		Intestinal disorders: Congenital anomalies. Infectious enterocolitis (Types & Pathogenesis). Acute appendicitis. Inflammatory bowel diseases (Crohn's disease & ulcerative colitis): Definition,		4

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No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
		etiology, pathogenesis & pathological changes. Malabsorption syndrome: Definition and classification. (Celiac disease: Pathogenesis & morphological changes). Diverticular diseases. Vascular diseases. Intestinal neoplasms: Adenoma, familial polyposis coli, colonic adenocarcinoma, carcinoid tumor & lymphoma.		
	Total			16
5	Microbiology	Bacterial Diarrhea: E. coli, Shigella, Campylobacter jejuni, Yersinia, enterocolitica Vibrio cholera, CL. Difficile (Antibiotic associated Diarrhea).		2
		Viral Diarrhea: Rota virus, Astroviruses, Calciviruses. Adenoviruses, Norwalk viruses. Echoviruses.		2
		Systemic Infection initiated in the gastrointestinal: - Enteric fever (Salmonella typhi and paratyphi) - Listeriosis		1
		Microorganisms causing food poisoning: Staph. Aureus, Closteridium botulinum, Bacillus cereus, Vibrio parahaemolyticus, Brucellosis.		1
		Gastric ulcer disease: Helicobacter pylori		1
		Parasite infection: Giardia lamblia Heterophytes Heterophytes		1

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No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
		Ascaris lumbricoides, Trichuris trichura Pin worms		1
		Taenia saginata, T. Solium Hymenolepis nana		1
		Hook worms & Strongyloides stercoralis		1
	Total			11
6	Pharmacology	Antiemetic agents.		2
		GI secretion & treatment of peptic ulcer.		1
		Laxatives. Antidiarrheal agents.		1
		Drugs used in Inflammatory bowel disease (IBD).		2
		Antiamoebiasis, Antigiardiasis. & Anthelmintic agents.		2
	Total			8
7	Medicine	GERD		2
		Peptic ulcer		2
		Malabsorption syndromes		2
		Inflammatory Bowel Diseases		2
		Irritable Bowel Syndrome		2
	Total			10
8	Pediatrics	Congenital malformations: TEF, Hypertrophic pyloric stenosis & Duodenal atresia		2
		Stomatitis-glossitis		2
		Acute Diarrhea & dehydration in childhood		2
		Chronic Diarrhea in childhood (celiac dis, lactose intolerance & Cystic Fibrosis)		2
	Total			8

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No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
9	Surgery	Gastrointestinal bleeding: Hematemesis, Fissures, Hemorrhoids		2
		Dysphagia & achalasia		1
		Carcinoma of esophagus		1
		Acute abdomen & Acute Appendicitis		2
		Intestinal obstruction		1
		Gastrointestinal tumors		1
		Total		
TOTAL				94
10	Anatomy	Liver	7	2
		Biliary tract and gallbladder		2
		Portal vein		2
		Portal circulation & bile circulation		2
		Peritoneum. Posterior abdominal wall and lumbar plexus		2
Total			8	
11	Physiology	Basic principles of gastrointestinal absorption.	7	2
		Function of Liver and biliary system		2
		Function of biliary system		2
		Hepatic circulation		2
		Exocrine function of Pancreas		2
Total			10	
12	Bio-chemistry	Digestive juices	7	2
		Carbohydrates digestion and absorption.		2
		Lipids digestion and absorption.		2
		Proteins digestion and absorption.		2
		Nucleic acids digestion and absorption.		2
		Vitamins and minerals absorption.		2
		Liver function tests.		2
Total			14	

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No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
13	Histology	Histology of the liver	7	2
		Histology of the biliary tree		2
		Histology of pancreas		2
	Total			6
14	Pathology	Pathophysiology of jaundice.		1
		Hepatic failure.		1
		Cirrhosis: Etiology, pathogenesis, morphology & clinical effects.		1
		Viral hepatitis: types, clinicopathologic syndromes.		1
		Drug-induced liver diseases.		1
		Neonatal cholestasis.	7	1
		Gall stones & cholecystitis (types, pathogenesis & morphology)		1
		Pancreatitis (types, pathogenesis & morphology)		1
	Total			8
15	Microbiology	Hepatitis A, B, C, D, E, G	7	2
		Entamoeba species (Histolytica)		2
		Hydatid cyst (Echinococcus granulossus).		2
		Schistosoma mansoni, Fasciola hepatica		2
	Total			6
16	Pharmacology	Drugs used in some liver diseases & Gallstones.	7	2
		Antiviral drugs		2
	Total			4
17	Medicine	Jaundice	7	1
		Viral Hepatitis		1

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No.	Units/Topics List	Sub Topics List	Number of Weeks	Contact Hours
		Acute hepatic failure & Liver cirrhosis		1
		Portal hypertension & ascites		1
	Total			4
18	Pediatrics	Viral Hepatitis in childhood (virus A)		2
		Neonatal jaundice.	7	2
	Total			4
19	Surgery	Liver abscess: pyogenic & amebic	7	1
		Hepatic tumors		1
		Cholecystitis (Acute & chronic)		1
		Gall stones		1
		Obstructive jaundice		1
		Acute pancreatitis		1
		Pancreatic tumors		1
	Total			7
	TOTAL			71
	Final Theoretical Exam		7 th	
Number of Weeks /and Units Per Semester			7	165

B. Case Studies and Practical Aspect:

No.	Tasks/ Experiments	Week Due	Contact Hours
1	-spleen Stomach Pancreas Duodenum Small intestine and its mesentery	7	14

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No.	Tasks/ Experiments	Week Due	Contact Hours
	<p>Large intestine</p> <p>Pelvic colon.</p> <p>Rectum.</p> <p>Anal canal and Perineum</p> <p>Liver, portal circulation & bile circulation</p> <p>Biliary tract and gallbladder</p> <p>Portal vein</p> <p>Blood supply of the GIT</p> <p>Anterior abdominal wall.</p>		
2	<p>Pathology</p> <p>Oral pathology:</p> <p>Inflammatory diseases.</p> <p>Leukoplakia & neoplastic conditions.</p> <p>Salivary gland lesions.</p> <p>Oral manifestations of systemic diseases</p> <p>Esophageal disorders:</p> <p>Gastric pathology</p> <p>Intestinal disorders</p>	7	14
3	<p>Microbiology</p> <p>Bacterial Diarrhea:</p> <p>E. coli, Shigella, Campylobacter jejuni, Yersinia, enterocolitica</p> <p>Vibrio cholera, CL. Difficile (Antibiotic associated Diarrhea).</p> <p>Systemic Infection initiated in the gastrointestinal:</p> <p>- Enteric fever (Salmonella typhi and paratyphi)</p> <p>Microorganisms causing food poisoning</p> <p>Gastric ulcer disease</p> <p>Parasite infection</p>	7	8

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No.	Tasks/ Experiments	Week Due	Contact Hours
4	Basic clinical skills History taking and examination of a patient with urogenital problem	7	10
5	- Final practical exam	7 th	2
Number of Weeks /and Units Per Semester		7	48

V. Teaching Strategies of the Course:

- Interactive lectures
- Discussion
- Case studies
- Seminars
- PBL
- Office hours
- Self-learning
- Lab experiments

VI. Assessment Methods of the Course:

- Quizzes
- Final written exam
- Final practical exam
- OSPE
- Oral discussion
- Homework

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VIII. Schedule of Assessment Tasks for Students During the Semester:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	
1	Quizzes	3 rd	5	5%	
2	Oral desiccation & Homework	5 th	15	15%	
3	Final Practical Exam & OSPE	6 th	30	30%	
4	Final Theoretical Exam	7 th	50	50%	
Total			100	100%	

IX. Learning Resources:

1- Required Textbook(s):

- 1- S Standing, 2016, Gray's Anatomy: The Anatomical Basis of Clinical Practice, 41st Edition, Elsevier.
- 2- K E Barrett, S M Barman, S Boitano, H L Brooks, 2015, Ganong's Review of Medical Physiology, 25th Edition, New York, McGraw-Hill Medical Education.
- 3- L Junqueira, J Carneiro, 2005, Basic Histology. Text and Atlas, 11th Edition, New York, McGraw-Hill Medical.
- 4- R Goering, H Dockrell, M Zuckerman, P Chiodini, 2019, Mims' Medical Microbiology and Immunology, 6th Edition, Edinburgh, Elsevier.
- 5- V Kumar, A Abas, J Aster, 2017, Robbins Basic Pathology, 10th Edition, Elsevier.
- 6- M A Clark, R Finkel, J A Rey, K Whalen, 2011, Lippincott's Illustrated Reviews: Pharmacology, 5th Edition, Philadelphia, Lippincott Williams & Wilkins.

2- Essential References:

- 1- R S Snell, 2000, Clinical Anatomy for Medical Students, 6th Edition, Washington, Little, Brown and Company.
- 2- J E Hall, 2013, Guyton and Hall Textbook of Medical Physiology, 13th Edition, Philadelphia, Saunders.
- 3- V Kumar, A Abas, J Aster, 2020, Robbins & Cotran Pathologic Basis of Disease, 9th Edition, Philadelphia, Saunders.

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- 4- C Ray, K J Ryan, 2003, Sherris Medical Microbiology: An Introduction to Infectious Diseases, 4th Edition, New York, McGraw-Hill Medical Education.
- 5- B Katzung, 2017, Basic and Clinical Pharmacology, 14th Edition, New York, McGraw-Hill Medical Education.

3- Electronic Materials and Web Sites etc.:

Websites:

- 3- The Visible Body Learn Site

<https://www.visiblebody.com/learn/nervous>

- 4- Medical news today

<https://www.medicalnewstoday.com/articles/307076>

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XI. Course Policies: (Based on the Uniform Students' Bylaw (2007))

1	Class Attendance: Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	Tardiness: A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	Exam Attendance/Punctuality: No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	Assignments & Projects: Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	Cheating: Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	Forgery and Impersonation: Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam,

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	assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
7	Other policies: The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.

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