

Course Syllabus of Gastrointestinal system

Faculty : Medicine and health sciences

Department: Basic Sciences

Program : Bachelor of Medicine and Surgery

I. General information about the course instructor :							
Name	More than 10	Office Hours(3 Hours Weekly)					
Location & phone number	-	Sat	Sun	Mon	Tue	Wed	Thu
Email	-						

II. General information about the course						
1. Course Title :	Gastrointestinal system					
2. Course Code and Number :	BMD22					
3. Credit Hours :	Credit Hours					Total
	Theoretical	Seminar/Tutorial	Practical	Clinical	Training	
	12	-	2	-	-	
4. Level and Semester:	3rd year/ 1st semester					
5. Pre-requisites:	Introductory blocks of the first and second year					
6. Co-requisites :	None					
7. Program in which the course is offered:	Bachelor of Medicine and Surgery					
8. Teaching Language:	English					
9. Instruction location:	University of Science and Technology, Sana'a					

III. Course Description

The goal of this course is to provide the medical student with comprehensive knowledge about stomach, intestines, spleen, liver biliary tract and gallbladder and associated soft tissues with their common clinical disorders.

This is an integrated module of the gastrointestinal system. It contains basic biomedical sciences of anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, histology correlated with the clinical and practical disciplines of this system. Teaching and learning methods include interactive lectures, small group discussion (Problem-Based Learning "PBL"), practical sessions and demonstrations

IV. Course Aims:

The course aims are :

1. To provide the students with basic medical knowledge about the components of the gastrointestinal tract and liver.
2. To make the students able to recognize the common disorders that affect gastrointestinal tract , spleen, liver, biliary tract and gallbladder with their etiologies, diagnoses and pharmacological and non pharmacological bases of treatment.
- 3- To make the students gave the diagnostic and therapeutic principles relevant to the gastrointestinal tract and liver.
4. To acquire clinical skills of taking the history and performing the clinical examination of the gastrointestinal system.

V. Course Intended Learning Outcomes (CILOs) :

1. Describe the basic medical sciences of the, gastrointestinal tract, spleen, liver, biliary tract and gallbladder in the normal and common pathological conditions
2. Outline the etiology, diagnostic features, complications, and principles of prevention and the pharmacological principles of the treatment of common gastrointestinal disorders..
- 3 Correlate the pathophysiological changes with clinical history, clinical findings, the results of laboratory and imaging findings to reach into a provisional diagnosis.
4. Perform and document an accurate medical history and clinical examination of a patient with a gastrointestinal disorders (in the Skill lab)
5. Carry out an initial assessment of a patients with gastrointestinal problem and suggest acceptable differential diagnoses(through clinical scenarios).
6. Synthesize the principle steps of the management for patients with common gastrointestinal disorders.
7. Perform on a model some routine technical and therapeutic procedures needed in gastrointestinal problems such as management of gastric ulcers, hepatitis
8. Work effectively in a team through preparing collective assignments by using various information technology skills in accessing different learning resources such as tutorials and presenting case studies and in the skill lab activities.

VI. Course topics and sub-topics (theoretical and practical) with contact hours and alignment to CILOs

Topics/Units of Course Contents

First: Theoretical Aspects

No .	Course Topics/Units	Sub-topics	No. of lectures	Contact Hours
1	Anatomy	Spleen, oral cavity, oropharynx-oesophagus & stomach Duodenum. Small intestine and its mesentery Large intestine Caecum and appendix A T D colon (large intestine). Pelvic colon. Rectum. Anal canal and Perineum Liver, portal circulation, bile circulation & pancreas Biliary tract and gallbladder Portal vein Peritoneum. Posterior abdominal wall and lumbar plexus Blood supply of the GIT Aorta and its branches. Inferior vena cava and its tributaries. Autonomic supply and segmental innervations Lymph drainage Surface, radiological and clinical anatomy Anterior abdominal wall. Inguinal canal and rectus sheath. Embryology of GIT	12	24
2	Physiology	Principles of gastrointestinal function, motility, nervous, and hormonal control & blood circulation Mastication and swallowing Salivary secretion. Stomach, functions, regulation of emptying, control of secretions, motility, and vomiting Absorption, metabolism Defecation	10	20
3	Histology	Oral cavity, salivary glands & Oesophagus. Stomach & Small intestine Appendix, Colon & Anal canal Histology of the liver Histology of the biliary tree Histology of the pancreas	5	10

4	Pathology	<p>Esophageal disorders: Congenital & common acquired 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>	10	20	
5	Biochemistry	<p>Xenobiotic Tumor markers</p>	1	2	

6	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. Adenoviruses, Norwalk viruses. Echoviruses.</p> <p>Systemic Infection initiated in the gastrointestinal: - Enteric fever (Salmonella typhi and paratyphi) - Listeriosis</p> <p>Microorganisms causing food poisoning: Staph. Aureus, Clostridium botulinum, Bacillus cereus, Vibrio parahaemolyticus, Brucellosis.</p> <p>Gastric ulcer disease: Helicobacter pylori</p> <p>Parasite infection: Entamoeba species (Histolytica) Giardia lamblia Heterophyes Heterophyes Taenia saginata, T. Solium Hymenolepis nana Hook worms & Strongyloides stercoralis Schistosomiasis: S. Mansoni Ascaris, pin worm H.N</p>	10	20	
7	Pharmacology	<p>Antiemetic agents. GI secretion & treatment of peptic ulcer. Laxatives. Antidiarrheal agents. Drugs used in Inflammatory bowel disease (IBD). Antiamoebiasis & Antigiardiasis. Anthelmintic agents.</p>	6	12	
8	Medicine	<p>Concept, etiology, Clinical picture, diagnosis, treatment & prognosis of:</p> <p>GERD Peptic ulcer Inflammatory Bowel Diseases Hepatitis</p>	4	8	
9	Pediatrics	<p>Clinical picture, diagnosis, treatment & prognosis of:</p> <p>Congenital malformations: TEF, Hypertrophic pyloric stenosis & Duodenal atresia A. Diarrhea & dehydration in childhood Chronic Diarrhea and malabsorption in childhood (celiac dis, lactose intolerance & Cystic Fibrosis)</p>	4	8	

10	Surgery	Clinical picture, diagnosis, treatment & prognosis of: Upper & lower gastrointestinal bleeding: Hematemesis, Fissures, Hemorrhoids(perianal condition) A. abdomen & A. Appendicitis Intestinal obstruction	3	6	
11	Hepato/ Physiology	Basic principles of gastrointestinal absorption. Function of Liver and biliary system Hepatic circulation+jaundice Exocrine function of Pancreas	4	8	
12	Hepato/Biochemistry	Digestive juices Carbohydrates digestion and absorption. Lipids digestion and absorption. Proteins digestion and absorption. Nucleic acids digestion and absorption. Vitamins and minerals absorption. Liver function tests.	6	12	
13	Hepato/ pathology	Cirrhosis: pathogenesis, morphology & clinical effects. Viral hepatitis: types, clinicopathologic syndromes. Drug-induced liver diseases. Alcohol-induced liver diseases. Neonatal cholestasis. Gall stones & cholecystitis (types, pathogenesis & morphology) Pancreatitis (types, pathogenesis & morphology) Pancreatic carcinoma	3	6	
14	Hepato/ Microbiology	Definition, pathogenesis & Laboratory diagnosis: Hepatitis A, B, C, D, E, G Hydatid cyst (Echinococcus granulosus). Fasciola hepatica	3	6	
15	Hepato/ Pharmacology	Drugs used in some liver diseases & Gallstones Antiviral drugs	2	4	
16	Hepato/ Medicine	Clinical picture, diagnosis, treatment & prognosis of: Jaundice Viral Hepatitis Liver cirrhosis Portal hypertension & ascitis	3	6	
17	Hepato/ pediatric	Clinical picture, diagnosis, treatment & prognosis of: Neonatal jaundice.	1	2	
18	Hepato/ Surgery	Cholecystitis (Acute & chronic)Calculus Obstructive jaundice	3	6	
Total			90	180	

Second: Practical/Tutorial/Clinical Aspects				
No.	Practical/Tutorial/Clinical topics	No. of labs	Contact Hours	
1	History of a patient with abdominal disease General examination of a patient with abdominal disease Abdominal examination: Inspection & Palpation Abdominal examination: Percussion & Auscultation PR examination	5	10	
2	History of a patient with hepatic disease General examination of a patient with hepatic disease Abdominal examination Abdominal imaging	5	10	
3	Anatomy	13	26	
4	Pathology	7	14	
Total		30	60=2C.H	