

COURSE PLAN

FIRST: BASIC INFORMATION

College					
College	: Medicine				
Department	: Basic Medical Sciences				
Course					
Course Title	:Gastro-Intestinal Tract (GIT) System				
Course Code	: 31500251				
Credit Hours	: 6 h/ 6 weeks				
Year Level	: second Year/ Second Semester				
Instructor					
Name	: Dr Ali Al Khader				
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Office Hours	:				
Class Times	Buiding	Day	Start Time	End Time	Room No.
	Lecture Hall Complex	According to timetable	8.00	12.00	1 or 2
	Labs	According to timetable	12.00	4.00	-Anatomy lab -Histology lab -Microbiology lab - Pathology lab
Text Books					

1. **Anatomy:**

- ☐ Clinical Anatomy for Medical Students. By R. S. Snell, latest edition.
- ☐ Grants Atlas of Anatomy or any available Atlas of Human Anatomy.
- ☐ Basic Histology. By L. Carlos Junqueira, latest edition.
- ☐ Before we are born. By K. L. Morre and T. V. N. Persaud, latest edition.

2. **Physiology:**

- ☐ Textbook of Medical Physiology. By Guyton and Hall, latest edition.

3. **Biochemistry:**

- ☐ Biochemistry. By Campbell & Farrell latest edition.
- ☐ Supplementary Departmental Handouts.

4. Pharmacology:

- ☐ Lippincott's Illustrated Reviews Pharmacology, latest edition.

5. Pathology:

- ☐ Basic Pathology. By Kumar, Cotran and Robbins, latest edition.
- ☐ Supplementary Departmental Handouts.

6. Microbiology:

- ☐ Medical Microbiology.
- ☐ Jawetz Melnick and Adelborg's Medical Microbiology, By: Geo, F. Brooks, Karen C. Carroll, Janet, S. Butel, Stephan, A. Mores, Timothy. A. Mietzner, latest edition.

7. Public Health:

- ☐ Supplementary Departmental Handouts.

SECOND: PROFESSIONAL INFORMATION**COURSE DESCRIPTION**

This course covers the study of gastrointestinal system including its normal anatomy, histology, embryology and physiology including neuronal mechanisms and hormonal regulation of the GIT, with emphasis on pancreatic, and biliary functions. In addition, this course covers major types of nutrients and digestion and absorption of carbohydrates, proteins and fats. The course also explain major disease processes of GIT including malabsorption and neoplasia, and various bacterial, viral, fungal, and parasitic infections affecting the GIT, in addition to covering pharmacological principles of treatments used in GI disorders. This course also covers essential nutritional requirement, body weight and energy balance, nutritional deficiencies, and disease processes associated with diet

COURSE OBJECTIVES

By the end of this course, students are expected to:

- Know the gross structure and applied clinical anatomy of each GIT region and organ.
- Know microscopic appearance of different parts of the GIT.
- Describe the normal embryology development of the GIT.
- Describe the Physiological function of each GIT structure.
- Understand the neuronal mechanisms and hormones regulation of the GIT, with emphasis on pancreatic, and biliary functions.
- Know the major types of nutrients.
- Understand how proteins, carbohydrate, and fats are digested and absorbed.
- Identify and describe the major disease processes including mal-absorption conditions and neoplastic conditions affecting different organs of the GIT in terms of pathogenesis, gross and microscopic changes, manifestations, and complications.
- Identify various bacterial, viral, fungal, and parasitic infections affecting the GIT.
- Know the principle manifestations, diagnosis, and prevention of each individual microorganism and parasitic agent affecting the GIT.
- Know the mechanisms of action, pharmacokinetics, indications, and adverse effects of commonly used drugs in the treatment of GIT disorders.
- Understand the essential nutritional requirement, body weight and energy balance, nutritional deficiencies, and disease processes associated with diet.

COURSE LEARNING OUTCOMES

1) Knowledge and Understanding

1. Gross structure and applied clinical anatomy of each GIT region and organ.
2. Microscopic appearance of different parts of the GIT.
3. Normal embryology development of the GIT.
4. Physiological function of each GIT structure.
5. Neuronal mechanisms and hormones regulation of the GIT, with emphasis on pancreatic, and biliary functions.
6. Major types of nutrients.
7. Digestion and absorption proteins, carbohydrate, and fats.
8. Pathogenesis, gross and microscopic changes, manifestations, and complications of major disease processes including mal-absorption conditions and neoplastic conditions affecting different organs of the GIT.
9. Various bacterial, viral, fungal, and parasitic infections affecting the GIT
10. Manifestations, diagnosis, and prevention of each individual microorganism and parasitic agent affecting the GIT
11. Mechanisms of action, pharmacokinetics, indications, and adverse effects of commonly used drugs in the treatment of GIT disorders.
12. Essential nutritional requirement, body weight and energy balance, nutritional deficiencies, and disease processes associated with diet.

2) Professional Skills

The student should be able to correlate knowledge with the clinical applications.

3) Competences (Transferable skill and attributes)

The student should be able to integrate the knowledge of normal GIT structure and function with disease processes, clinical diagnosis and treatment

COURSE SYLLABUS

A- Lectures:

#	LECTURE TITLE	LEARNING OBJECTIVES
1	Introduction to GIT System (All disciplines)	<ul style="list-style-type: none"> - Understand the general outline of the GIT module. - Be familiar with the modalities of teaching throughout the course. - Acknowledge the important relation between normal and abnormal structure and function. - Appreciate the importance of basic sciences in clinical application.
2	Oral cavity, Anatomy and Histology Part I (Anatomy 1)	<ul style="list-style-type: none"> - Understand the regions and boundaries of the oral cavity. - Describe parts of the mouth, the oral cavity proper. - Know the major anatomic features of the lips, cheeks, and gingivae
3	Oral Cavity, Saliva and Salivary Secretion (Physiology 1)	<p>Explain Oral Cavity</p> <p>Explain Mastication (chewing), causes, reflex, function</p> <p>Explain saliva, salivary secretion, Formation & Modification, Composition</p> <p>Functions of saliva,</p> <p>Describe factors regulate salivary secretion: Nervous regulation of salivary secretion,</p> <p>Aldosterone, flow rate on saliva composition</p>

4	Oral cavity, Anatomy and Histology Part II (Anatomy 2)	<ul style="list-style-type: none"> - Describe the gross anatomy and histology of the tongue and palate. - Outline the intrinsic and extrinsic muscles of the tongue and their movements, innervations, and blood supply. - Identify tongue papillae and describe their structures. - Describe the hard and soft palate and their anatomic features.
5	Diseases of the Oral Cavity (Pathology 1)	<ul style="list-style-type: none"> - Give a simplified classification of diseases of oral cavity. - Describe the etiology, pathogenesis, and pathology of the main diseases of oral cavity. - Classify the diseases of the salivary glands. - Provide a list of the of salivary gland tumors and briefly describe their pathology.
6	Embryology of the coelomic cavity and peritoneum (foregut) (Anatomy 3)	<ul style="list-style-type: none"> - Discuss the embryology of coelomic cavity and peritoneum. - List the divisions of the embryonic cavity. - Review the development of the diaphragm.
7	The Salivary glands And teeth (Anatomy 4)	<ul style="list-style-type: none"> - Describe the anatomy of various salivary glands (location and ducts) and teeth - Describe the parotid, sub-mandibular, and sublingual salivary glands including their relations vascular supply and innervations. - Describe the histology of various salivary glands and teeth

8	GI motility (neural control) (Physiology 2)	<p>Discuss GIT smooth muscle functions as a syncytium</p> <p>Explain the role of the following in GIT motility</p> <ul style="list-style-type: none"> a. autonomic system (sympathetic and parasympathetic) b. enteric nervous system(Myenteric plexus & Sub-mucosal plexus) c. Interstitial cells of Cajal <p>Explain the GIT action potential (slow wave & Basal electrical rhythm) electrical and ionic basics</p> <p>Explain the types of GIT reflexes</p>
9	Anatomy of the Pharynx, and Esophagus (Anatomy 5)	<ul style="list-style-type: none"> - Know the muscles of the soft palate, their movements, and their innervation - Outline the vascular supply. - Describe the anatomy and histology of various parts of the pharynx. - Identify the muscular wall structure of the esophagus and its anatomical relations and sphincters. - Describe the histological structure of the wall and glands of the esophagus. - Describe the nerve and blood supply of the pharynx and esophagus.
10	Embryology of the midgut (Anatomy 6)	<ul style="list-style-type: none"> - Describe the development of the midgut - Describe the stages of development of the midgut

11	<p>GI motility (hormones control)</p> <p>(Physiology 3)</p>	<p>Explain regulatory substances in the GIT</p> <p>a. GI hormones: Gastrin, cholecysto Kinin, Secretin, Glucose-dependent insulin-tropic peptide, Motilin</p> <p>b. GI Paracrine: Somatostatin, Histamine</p> <p>c. GI neurocrine GRP (Gastrin Releasing peptide or bombesin) & Enkephalins (met-enkephalin and leu-enkephalin)</p> <p>Explain the types of GI Motility: Phasic & Tonic contractions:</p> <p>Describe the functional types of movements in GIT: Propulsive movement & Mixing movement</p>
12	<p>Abdominal Wall and Inguinal region</p> <p>(Anatomy 7)</p>	<ul style="list-style-type: none"> - Describe the landmarks and different regions of the anterior abdominal wall. - Describe the layers of the anterior abdominal wall including abdominal muscles and rectus sheath. - Describe the anatomy of inguinal region. - Describe the spermatic cord coverings and contents. - Make a comparison between the inguinal, umbilical, and femoral hernia
13	<p>Abdominal Cavity and Peritoneum (stomach)</p> <p>(Anatomy 8)</p>	<ul style="list-style-type: none"> - Indicate the relations and arrangements of the abdominal organs. - Describe foldings and ligaments of the peritoneum. - Indicate the Intra- and retroperitoneal relations. - Describe the lesser and greater omen (sacs) and other related peritoneal fosse and recesses. - Describe the anatomy of the mesenteries. - Indicate the anatomical relationships of the abdominal esophagus. - Describe the anatomy of stomach (location, parts, and anatomical relations). - Identify the histological structure of the stomach.

14	Diseases of the Esophagus (Pathology 2)	<ul style="list-style-type: none"> - Describe the main acquired anatomic disorders of the esophagus with emphasis on hiatal hernia, achalasia and diverticulosis in terms of etiology, pathogenesis and pathologic features. - Describe the main pathologic features of the esophagus with emphasis on reflux esophagitis. - Mention the cause, pathologic features, and clinical significance of esophageal varices. - Indicate the importance of Barrett's esophagus as an example of a pre-malignant lesion of the esophagus. - Describe the main tumors of the esophagus.
15	Esophagus & Swallowing I (Physiology 4)	<p>Discuss the swallowing (Deglutition) process.</p> <ol style="list-style-type: none"> 1. Voluntary stage 2. Pharyngeal stage: Associated actions, Neural control, Pharyngeal stage and respiration, 3. Esophageal stage: Types of esophageal peristalsis (Primary & Secondary) <p>Explain lower esophageal sphincter control & relaxation</p>
16	Anatomy and Histology of GIT hollow organs I (small intestine) (Anatomy 9)	<ul style="list-style-type: none"> - Describe the anatomy of the duodenum and small intestine (location, parts, and anatomical relations) - Compare the anatomical features of the jejunum and ileum.
17	Esophagus & Swallowing II (Physiology 5)	<p>Explain lower esophageal sphincter role preventing reflux gastric contents</p> <p>Explain receptive relaxation of the stomach</p> <p>Discuss aero-phagia and intestinal gas.</p> <p>Discuss esophageal Secretion</p> <p>Discuss Gastro-esophageal reflux disease (GERD) Definition & Pathophysiology &</p> <p>clinical presentation and diagnosis</p>

18	Diseases of the Stomach (gastritis and peptic ulcer disease) (Pathology 3)	<ul style="list-style-type: none"> - Provide a simplified classification of diseases of the stomach. - Describe peptic ulcer disease in terms of etiology, pathogenesis, types, and pathology.
19	Anatomy and histology of GIT hollow organs II (large intestine) (Anatomy 10)	<ul style="list-style-type: none"> - List parts and describe general features and relations of large intestine. - Describe the anatomy of the rectum and anal canal with emphasis on sphincters. - Compare the histological features of the small and large intestines. - Identify the histological features and characteristics of different transitional areas and sphincters (gastro-esophageal, gastro-duodenal, ilio-cecal and recto-anal).
20	Stomach I (Motor function) (Physiology 6)	<p>Describe Motor function of the stomach which includes:</p> <p>A. Storage functions of the stomach, B. Mixing and propulsion of food in the stomach & Pyloric Pump, C. Stomach emptying & Role of the Pylorus in Controlling Stomach Emptying</p> <p>Discuss the properties of Chyme</p> <p>What is the Hunger Contractions?</p> <p>Explain the regulation of stomach emptying through:1. Gastric factors that promote emptying, 2. Duodenal factors that inhibits stomach emptying</p> <p>Explain the role of emotions for the influence in gastric motility</p>
21	Embryology of the solid organs (liver and pancreas) (Anatomy 11)	<ul style="list-style-type: none"> - Describe the development of liver, pancreas. - Describe the common congenital abnormalities of the GIT.
22	Gastritis and Helicobacter Pylori (Microbiology 1)	<ul style="list-style-type: none"> - Understand the role of Helicobacter in gastritis, laboratory diagnosis and sensitivity to antibiotics. - Describe gastritis and Helicobacter pylori-induced gastritis in terms of pathogenesis, pathologic features, and complications.

23	Pathology of Gastric Tumours (Pathology 4)	<ul style="list-style-type: none"> - Provide a simplified classification of gastric tumors. - Enumerate the main types of gastric carcinoma and describe their main features. - Identify the main types of gastric lymphoma.
24	Gastric Secretion I (Physiology 7)	<p>Explain the Gastric secretion: a. Intrinsic Factor, b. Pepsinogen, c. Hydrochloric acid main functions</p> <p>Discuss stomach Mucosal barrier: mucosa and mucous membrane</p> <p>Discuss the mechanism of gastric Hydrochloric acid secretion</p> <p>Explain the agents that stimulate and inhibits Hydrochloric acid secretion</p> <p>Discuss mechanisms control gastric H⁺ secretion</p> <p>a. Vagal stimulation</p>
25	Anatomy of accessory organs of GIT (Solid organs/liver and pancreas) (Anatomy 12)	<ul style="list-style-type: none"> - Describe the peritoneal coverings and ligaments of various organs in the abdomen. - Describe the anatomy of the liver (location, parts, relations and vascular supply)

26	Gastric secretion II (Physiology 8)	b. Gastrin c. Histamine Discuss the potentiating effects of ACh, histamine, and gastrin on Hydrochloric acid secretion Discuss the factors that inhibit gastric Hydrochloric acid secretion including a. Low pH (< 3.0) in the stomach, b. Somatostatin, c. prostaglandin Discuss inhibition of gastric secretion by other post-stomach intestinal factors Discuss Gastric secretion during the inter-digestive period Pathophysiology of peptic ulcer (gastric and duodenal) Pathophysiology of noise and vomiting
27	Drugs Used in Peptic Ulcer Disease (Pharmacology 1)	<ul style="list-style-type: none"> - List major drugs or groups of drugs associated with GI ulceration and ways of preventing or reducing this risk. - Describe the mechanism of action of drugs or groups of drugs commonly employed in the management of peptic ulcer disease. - Explain the rationale behind the use of drug combination in Peptic ulcer disease. - List important antimicrobial drugs employed in peptic ulcer disease, and explain the therapeutic basis of their inclusion in the management of peptic ulcer disease. - Enumerate the adverse effects of drugs commonly used in peptic ulcer disease.
28	Bacterial Infections of GIT (Microbiology 2)	<ul style="list-style-type: none"> - Recognize morphology, culture, and the pathogenesis of causative bacteria (Salmonella, Shigella and Campylobacter). - Appreciate epidemiology and treatment.

29	Anti-emetics and Drugs Affecting Gastric Motility (Pharmacology 2)	<ul style="list-style-type: none"> - Describe the mechanism of drug-induced vomiting. - List drug classes employed as anti-emetics and the mechanism of action each class. - Explain the clinical implications of drugs affecting gastric emptying.
30	Small Intestinal Motility & Pancreatic Secretion (Physiology 9)	<p>Explain Small intestinal motility: Segmentation and Peristaltic contractions</p> <p>Explain ileo-cecal valve structure and function</p> <p>Explain Pancreatic secretion Composition , function, formation and bicarbonate secretion</p> <p>Discus the factors control pancreatic secretion: Secretin, Cholecystokinin and Acetylcholine (via vago-vagal reflexes)</p> <p>Discus Multiplicative Effects of Different Stimuli.</p> <p>Describe bile composition, secretion, Storing and concentrating</p> <p>Describe gallbladder Contraction and Functions</p>
31	Diarrhea Due to Viruses (Microbiology 3)	<ul style="list-style-type: none"> - Identify the characteristics of Rota viruses and to a lesser extent those of adenoviruses 40 and 41, Norwalk viruses, Corona viruses and Astroviruses. - Describe the infection mechanism, define antibody response, understand epidemiology, laboratory diagnosis, and control
32	Bile Secretion & Colon Motility and Defecation (Physiology 10)	<p>Describe Bile salts Formation of Micelles and Recirculation (entero-hepatic circulation).</p> <p>Discus Colon motility: Segmentation (mixing movement or Haustration) and Propulsive Movements "Mass Movements."</p> <p>Discus GI Gastrocolic and Duodenocolic Reflexes</p> <p>Explain Transit time in the small intestine and colon</p> <p>Explain Absorption in the colon</p> <p>Explain Feces formation and structure and the role Intestinal bacteria in feces structure and formation</p> <p>Explain Defecation Reflexes: local enteric nervous system and parasympathetic defecation reflex</p> <p>Explain Secretion of mucus in small intestine and large intestine</p>
33	Absorption of Carbohydrates & Proteins	<p>Explain GI metabolic factors blood flow : effect of activity and</p> <p>Discuss "Countercurrent" Blood Flow in the Villi.</p> <p>Explain Nervous control of gastrointestinal blood flow</p>

	(Physiology 11)	Explain GI absorption of carbohydrates: pentose, Glucose and galactose and Fructose Explain absorption of proteins: Free amino acids & dipeptides & tripeptides and Nucleic acids
34	Digestion of Carbohydrates Proteins and Lipids (Biochemistry 1)	Discuss the role of digestive enzymes in the process of digestion: Digestion of carbohydrates. Digestion of proteins. Digestion of lipids. Describe the clinical laboratory investigations of the pancreatic enzymes and their interpretation and significance.
35	Pancreatic function tests and liver metabolic storage diseases (Biochemistry 2)	- Discuss metabolic liver diseases and their effect on general metabolism.
36	Diseases of the Intestine I (malabsorption) (Pathology 5)	- Discuss malabsorption in terms of causes, clinical significance, and complications.
37	Blood Supply of GIT and Portal Circulation (Anatomy 13)	- Describe the blood supply of the stomach, liver, pancreas, spleen, duodenum, small and large intestines including rectum and anal canal. - Describe the formation, major tributaries, branches, relations, and termination of the portal system.
38	Diseases of the Intestine II (inflammatory and ischemic bowel diseases) (Pathology 6)	- Describe the chronic inflammatory bowel disease in terms of its main types, etiology, clinical, endoscopic, and pathologic features. - Discuss the diverticular diseases of the bowel. - Describe the types of ischemic bowel diseases in terms of etiology and pathologic features
39	Absorption Lipids & water & minerals & vitamins (Physiology 12)	Explain absorption of lipids Explain Absorption and secretion of water Explain Absorption and secretion of electrolytes: sodium, chloride, Potassium, magnesium, phosphate Discuss absorption of Vitamins and Calcium
40	Embryology of The Hindgut (Anatomy 14)	Understanding the development of different part of the large intestine Identify some large intestine congenital anomalies.
41	Nutrition and Gastrointestinal	- Recognize the use of nutritional terms, categorizing the nutrients as macro, micro, and essentials.

	System (Community Medicine 1)	<ul style="list-style-type: none"> - Understand the use of Recommended Daily Allowance (RDA) tables. - Describe different preventive strategies to maintain good digestive health. - Understand general nutritional recommendations for patients with upper and lower gastrointestinal disorders.
42	Diseases of the Intestine III (bowel obstruction and tumors) (Pathology 7)	<ul style="list-style-type: none"> - Identify the main causes of bowel obstruction. - Provide a simplified classification of small and large intestinal tumors. - Describe polyps in terms of types and pathological feature - Describe the adenoma-carcinoma sequence and the two-hit hypothesis of development of colorectal carcinoma. - List and discuss the main diseases of appendix.
43	Dietary Roughage (Dietary fiber) (Community Medicine 2)	<ul style="list-style-type: none"> - List the mechanism by which dietary fibers affect normal functions of the GI tract. - Discuss the effect of fiber on nutrient absorption rates. - Describe the beneficial effects of dietary fiber in disease prevention and management.
44	Food Poisoning Cholera (Microbiology 4)	<ul style="list-style-type: none"> - Understand the role of E. Coli, Clostridium perfringens, C. botulinum, Staphylococcus aureus and B. cereus in food poisoning, appreciate their pathogenesis and epidemiology. - Recognize morphology, culture and pathogenesis of Vibrio cholera.
45	Hepatitis and Alcohol Liver Disease (Pathology 8)	<ul style="list-style-type: none"> - Identify the different clinical syndromes of hepatitis including neonatal hepatitis, with emphasis on laboratory and pathologic features of each condition. - Describe the other non-infectious causes of hepatitis and jaundice. - Discuss alcoholic liver disease as a classical example of toxin-induced liver disease in terms of pathogenesis and pathologic manifestations. - Identify the causes, types, routes, and pathological features of hepatitis. - Describe the role of the liver biopsy in hepatitis.
46	Laxative Agents (Pharmacology 3)	<ul style="list-style-type: none"> - Review the physiological aspects of normal bowel habits. - List the major classes of drugs employed as laxatives and describe their mechanism of action. - List the major indications and contraindications of laxatives. - Indicate the specific adverse effects associated with the commonly used laxative agents.

47	Intestinal Infections with Parasites I (Microbiology 5)	<ul style="list-style-type: none"> - Understand infections arising from Ascaris, Enterobius, Trichuris and Toxocara. - Recognize the life cycle, morphology and treatment of each parasite.
48	Intestinal Infections with Parasites II (Microbiology 6)	<ul style="list-style-type: none"> - Understand infection caused by Taenia, Himenolepis nana, Ancylostoma and Fasciola, their laboratory diagnosis, epidemiology and treatment.
49	Diarrhea Due to Parasites (Microbiology 7)	<ul style="list-style-type: none"> - Describe the morphology, life cycle, pathogenesis, epidemiology, and treatment of Giardia lamblia, Strongyloides, Balantidium, and Cryptosporidium parvum.
50	Viral Hepatitis (Microbiology 8)	<ul style="list-style-type: none"> - Recognize the characteristics of various types of viruses affecting the liver (HAV, HBV, HCV and HEV), their modes of infection, laboratory diagnosis, and epidemiology.
51	Cholestasis and Cirrhosis (Pathology 9)	<ul style="list-style-type: none"> - Define cholestasis and list its main causes. - List the main causes of hepatic failure and describe the pathogenesis, pathologic features, and complications of this disorder. - Define cirrhosis and describe the pathologic features and complications of this condition.
52	Amoebiasis (Microbiology 9)	<ul style="list-style-type: none"> - Understand the differences between Entameobahistolytica and other amoeba, laboratory diagnosis, and treatment. - Describe both intestinal and extra intestinal infections.
53	Liver Tumors and Diseases of Intra and Extra-hepatic Biliary Tree (Pathology 10)	<ul style="list-style-type: none"> - List and describe the major tumors of the liver. - Describe the common diseases of the gall bladder and the extrahepatic biliary tree. - Describe the pathology of of the major tumors of the biliary tree. - Know primary biliary cirrhosis and primarysclerosing cholangitis
54	Diseases of Exocrine Pancreas (Pathology 11)	<ul style="list-style-type: none"> - List the main congenital anomalies of the pancreas. - Define cystic fibrosis and describe its etiology, pathogenesis, and pathologic features.

		- Describe the causes, pathogenesis, and pathologic feature of different forms of pancreatitis.
55	Liver Function Tests (LFT) (Biochemistry 3)	- Know liver function tests and their use for clinical investigations. - Know the limitations, and the interpretations of LFT.
56	Antidiarrheal Drugs (Pharmacology 4)	- Describe the therapeutic aims of antidiarrheal drugs. - List the major classes of antidiarrheal drugs and describe their mechanism of action. - Indicate the major adverse effects possibly encountered in patients using antidiarrheal drugs.
57	Schistosomiasis and Hydatid Disease (Microbiology 10)	- Recognize the life-cycle, pathogenesis and the infection caused by Schistosoma mansoni and Echinococcus granulosus. - Understand the epidemiology and treatment of Schistosomiasis and Hydatid disease.
58	Treatments of GIT Related Infectious Diseases (Pharmacology 5)	- Discuss the treatment of hepatic viral disease. - Know the chemotherapy of giardiasis. - Know the chemotherapy of trypanosomiasis. - Know the chemotherapy for leishmaniasis. - Know the chemotherapy for toxoplasmosis.

B- Practical laboratory sessions

#	PRACTICLE TITLE	OBJECTIVES
1	First anatomy practical session	Identify main structures of the oral cavity and associated salivary glands and ducts. Also identify the pharynx and its parts and main features and relations. Identify and describe the salivary and biliary system including: salivary glands and ducts. Pancreatic and biliary system.



		<p>Surface anatomy of the above structures.</p> <p>Identify the layers of the anterior abdominal wall including:</p> <p>Skin.</p> <p>Fascia (superficial and deep).</p> <p>Abdominal wall muscles (origin, insertion and fascial coverings including the rectus sheath).</p> <p>Identify and recognize the inguinal region including:</p> <p>Inguinal ligament formation.</p> <p>Inguinal canal (location, walls and contents).</p> <p>Deep and superficial inguinal canal openings (rings).</p> <p>The spermatic cord and its coverings.</p> <ol style="list-style-type: none"> 1. Describe and identify the visceral and parietal peritoneal coverings including peritoneal layers, reflections, foldings mesenteries, omenta, falciform ligament, fossae, pouches, spaces, and gutters. 2. Identify the abdominal esophagus including: location, muscular wall, relations, and vascular supply. 3. Identify and describe the stomach including: <ol style="list-style-type: none"> a. Parts. b. Surfaces and borders. c. Epiploic foramin, location, borders and relation. d. Vascular supply. 4. Living anatomy: <ol style="list-style-type: none"> a. Describe the topographic planes and divisions of the anterior abdominal wall. <p>Identify and palpate iliac crest, costal margin, linea alba, rectus abdominis, subcostal margin, inguinal ligament and canal, deep and superficial inguinal rings.</p>
2	Second anatomy practical session.	<p>Identify and describe the duodenum including: parts and vascular supply.</p> <p>Identify the jejunum and ileum and their distinguished features.</p> <p>Identify and describe the cecum including:</p>

		<p>Ileocecal valve.</p> <p>Appendix.</p> <p>Identify and describe the large intestine including:</p> <p>Parts, length, and external structure.</p> <p>Vascular supply.</p> <p>Identify and describe the liver including:</p> <p>Location, lobes, borders, and relations.</p> <p>liver peritoneal coverings and attachments including triangular, coronary and falciform ligaments.</p> <p>The porta hepatis and vascular supply: portal vein, hepatic artery and the extra-hepatic biliary system.</p> <p>Identify and describe the gall bladder including:</p> <p>Parts, location, borders and relations.</p> <p>Vascular supply.</p> <p>Identify and describe the pancreas including:</p> <p>parts, location, and relations.</p> <p>The main and accessory pancreatic ducts.</p> <p>Identify and describe the spleen including:</p> <p>shape, surfaces, and relation.</p> <p>vascular supply</p> <p>Identify and describe:</p> <p>abdominal aorta and its various main branches.</p> <p>Inferior vena cava; location and main tributaries.</p> <p>Describe the surface anatomy of all abdominal organs and vessels.</p> <p>Identify and describe the portal system</p>
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3	Third anatomy practical session (histology)	<p>Describe the microscopic structure of the small intestine including jejunum and ilium.</p> <ol style="list-style-type: none"> 1. Describe the microscopic structure of the appendix. 2. Describe the microscopic structure of the cecum and large intestine. 3. Describe the microscopic structure of the solid organs including. <ol style="list-style-type: none"> a. Spleen. b. Liver. c. Pancreas.
4	First pathology practical session	<ol style="list-style-type: none"> 1. Describe the morphology of the more common disease of the salivary glands. <ol style="list-style-type: none"> a. Mucocele. b. Sialolithiasis. c. Sjogren's syndrome. d. Tumors. 2. Describe the morphology of the following esophageal disease. <ol style="list-style-type: none"> a. Esophagitis (different types). b. Barret's esophagus and adenocarcinoma. c. Esophageal varices. d. Squamous cell carcinoma 3. Describe the morphology of the following gastric disease. <ol style="list-style-type: none"> a. Gastritis. b. Gastric ulceration. c. Gastric adenocarcinoma 4. Describe the morphology of the following small intestine disorders. <p>Enteritis.</p> <p>Tumors (carcinoid, GIST, adenocarcinoma, lymphoma)</p> <p>Celiac disease and other causes of malabsorption.</p>
5	Second pathology	<p>Describe the morphology of the following large intestinal disorders.</p> <ol style="list-style-type: none"> a. Colonic polyps and adenomas.

	practical session	<ul style="list-style-type: none"> b. Colonic adenocarcinoma. 1. Diverticular disease. 2. Describe the morphology of inflammatory bowel disease and other forms of colitis and tutorial on them. <ul style="list-style-type: none"> a. Ulcerative colitis. b. Crohn's disease. 1. Pseudomembranous colitis 2. Describe the morphology of the following liver disorders <ul style="list-style-type: none"> a. Steatosis. b. Cirrhosis. c. Neoplasmas. d. Hepatitis. e. Metabolic liver disease 2. Describe the morphology of the following gall bladder and biliary disorders <ul style="list-style-type: none"> a. Cholelithiasis and cholecystitis. b. Carcinoma of the gall bladder. c. Cholestasis. 3. Exocrine pancreas pathology
6	First microbiology practical session (Stool examination)	<ul style="list-style-type: none"> 1. Examine wet preparation for fecal leucocytes and RBCs. 2. Prepare stool culture for Salmonella and Shigella.

C- Summary of the teaching activities in the GIT System

DEPARTMENT	# OF LECTURES	# OF PRACTICALS	Small Group Discussion
Anatomy	14	2 anatomy 1 histology	0



Physiology	12	0	0
Biochemistry	3	0	0
Pathology	11	2	0
Microbiology	10	1	0
Pharmacology	5	0	0
Comm. Med.	2	0	0
Multidisciplinary	1	0	2
Total	58	6	2

COURSE LEARNING RESOURCES

1. Lectures.
2. Practical classes.
3. Departmental handouts.

ONLINE RESOURCES**ASSESSMENT TOOLS**

(Write assessment tools that will be used to test students ability to understand the course material and gain the skills and competencies stated in learning outcomes)

ASSESSMENT TOOLS	%
Mid Exam (Theory)	30



Final Exam (Theory + Practicals + Clinical Cases)	70
TOTAL MARKS	100

THIRD: COURSE RULES

ATTENDANCE RULES

Attendance and participation are extremely important, and the usual University rules will apply. Attendance will be recorded for each class. Absence of 10% will result in a first written warning. Absence of 15% of the course will result in a second warning. Absence of 15% or more will result in forfeiting the course and the student will not be permitted to attend the final examination. Should a student encounter any special circumstances (i.e. medical or personal), he/she is encouraged to discuss this with the instructor and written proof will be required to delete any absences from his/her attendance records.

Use of Mobile Devices, Laptops, etc. During Class, unexpected noises and movement automatically divert and capture people's attention, which means you are affecting everyone's learning experience if your cell phone, laptop, etc. makes noise or is visually distracting during class. For this reason, students are required to turn off their mobile devices and close their laptops during class.

GRADING SYSTEM

Example:

*Percentages are according to the number of students who passed the exam.

REMARKS

{The instructor can add any comments and directives such as the attendance policy and topics related to ethics} .

COURSE COORDINATOR

Course Coordinator: Dr. Ali Al Khader - Department of Basic Sciences



Signature:

Signature:

Date: Date: