

## Course Syllabus

1	Course title	Gastrointestinal System	
2	Course number	0500251	
3	Credit hours	5 theory	1 practical
	Contact hours (theory, practical)	69 hours (59 lectures and 10 practical)	
4	Prerequisites/corequisites	--	
5	Program title	Doctor of Medicine	
6	Program code	05	
7	Awarding institution	The University of Jordan	
8	School	School of Medicine	
9	Department	Anatomy & Histology, Physiology & Biochemistry, Pathology, Microbiology, Pharmacology, and Internal medicine.	
10	Course level	Bachelor	
11	Year of study and semester (s)	Second year/ First Semester	
12	Other department (s) involved in teaching the course	-	
13	Main teaching language	English	
14	Delivery method	<input type="checkbox"/> Face to face learning    x <input checked="" type="checkbox"/> Blended <input type="checkbox"/> Fully online	
15	Online platforms(s)	x <input type="checkbox"/> Moodle <input type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input type="checkbox"/> Zoom <input type="checkbox"/> Others.....	
16	Issuing/Revision Date	19/12/2023	

**17. Course Coordinator:**

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**18. Other instructors:**



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7	<b>Dr Eyad Alsweety.</b>	JUH			
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## 19. Course Description and Aims:

### A- Course Description:

This course covers the digestive system including the alimentary tract, liver, biliary tree and the pancreas from the standpoints of anatomic and histologic structure and function including motility, secretions, digestion, chemistry of saliva and gastric secretions, bile, pancreatic secretions, and digestive enzymes. It also covers diseases of the digestive system including infections, congenital and acquired malformations, vascular disorders, peptic ulcer, tumors of the digestive system, immune mediated diseases, and drugs used in the treatment of these diseases as well as the clinical aspects of the system including signs, symptoms, and disease presentation.

Experienced people are invited to give lectures or a variety of interactive activities.

### B- Aims:

The aim of this course is to introduce basic knowledge about the digestive system in humans.

The main focus is the major digestive organs of the alimentary tract in addition to the liver, gallbladder and pancreas, where students will learn their histologic, physiologic, and biochemical properties, explore microbes causing infections, then move to common pathologic conditions and pharmacologic drugs used in their treatment.

**20. Program Intended Learning Outcomes (PLOs) (To be used in designing the matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program):**

1. Demonstrate basic knowledge of normal human structure and function at molecular, genetic, cellular, tissue, organ, system and whole-body levels in terms of growth, development, and health maintenance. Analyze the basic molecular and cellular mechanisms involved in the causation and treatment of human disease and their influence on clinical presentation and therapy.
2. Collect, interpret, document, and communicate accurately a comprehensive medical history, including the psychological and behavioral factors, and a thorough organ-system-specific physical examination inclusive of the mental status of the patient.
3. Integrate and communicate collected clinical information in the construction of appropriate diagnostic and therapeutic management strategies to identify life-threatening conditions ensuring prompt therapy, referral, and consultation with relevant disciplines and skillfully perform basic medical procedures for general practice on patients with common illness, acute and chronic, taking into account environmental, social, cultural and psychological factors.
4. Demonstrate in-depth knowledge of the epidemiology and biostatistics of common diseases, and analyze the impact of ethnicity, culture, socioeconomic factors and other social factors on health, disease and individual patient's health care.
5. Communicate effectively and professionally, both orally and in writing, with patients, their families, and with other healthcare providers utilizing information technology resources in his/her scholarly activities and professional development with the ability to teach others, and to understand and respect other healthcare professionals' roles, and apply the principles of multidisciplinary teamwork dynamics and collaboration.



6. Apply scientific methods including evidence –based approach to the medical practice including problem identification, data collection, hypothesis formulation, etc., and apply inductive reasoning to problem solving and ensure that clinical reasoning and decision making are guided by sound ethical principles.
7. Demonstrate knowledge of scientific research methods and ethical principles of clinical research and be able to write research proposals or research papers.
8. Demonstrate professionally the skills needed for Quality improvement, lifelong learning, and continuous medical education including the ability to identify and address personal strength and weakness, self-assess knowledge and performance, and develop a self-improvement plan.

**21. Intended Learning outcomes of the course (CLOs): Upon completion of the course, the student will be able to achieve the following intended learning outcomes:**

1. Describe the basic anatomic and histologic characteristics and function of digestive organs and their embryologic development and recognize the biochemical constituents of various secretions and their functions. *(Knowledge)*
2. Review a variety of diseases that affect the gastrointestinal system, their types, symptoms, causes and interpret the biochemical and genetic basis of disease. *(Knowledge)/ (Skills)*
3. List the commonly used drugs in gastrointestinal disorders, compare their mechanism of action, side effects, contraindications, and clinical uses. *(Knowledge)/ (Skills)*
4. Identify the common microbial species, their structure, epidemiology and evaluate gastrointestinal infections associated with them. *(Knowledge)/ (Skills)*
5. Discriminate between normal and diseased tissues and organs based on macroscopic and microscopic images and differentiate between them. *(Competency)*
6. Illustrate the general signs and symptoms related to gastrointestinal diseases and value the major points in taking history, physical exam and laboratory investigations from patients with gastrointestinal diseases. *(Competency)*
7. Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers and society. *(Skills)*



## 22. The matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program):

Program ILOs ILOs of the course	CLO (1)	CLO (2)	CLO (3)	CLO (4)	CLO (5)	CLO (6)	CLO (7)
PLO (1)	✓	✓	✓	✓			
PLO (2)						✓	
PLO (3)							
PLO (4)							
PLO (5)							✓
PLO (6)					✓		
PLO (7)							
PLO (8)							

## 23. Topic Outline and Schedule:

Week	Lecture	Topic	Student Learning Outcome (SLO)	Descriptors <sup>***</sup>	Learning Methods (Face to Face/Blended/ Fully Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
	1.1	Physiology Introduction To GI Physiology	Describe the functional structures of the GI tract	K	Face to face		Synchronous Lecturing	Written exam	28-A5
	1.2	Physiology Gastrointestinal motility	Describe motility along the GIT with its control	K	Face to face		Synchronous Lecturing	Written exam	28-A5
	1.3	Physiology GIT secretions 1	Recognize the salivary gland and esophageal secretions and describe their control	K	Face to face		Synchronous Lecturing	Written exam	28-A5
	1.4	Physiology GIT	Recognize the gastric and pancreatic	K	Face to face		Synchronous Lecturing	Written exam	28-A5

	secretions-2	secretions and describe their control.							
1.5	<b>Anatomy</b> Oral cavity	Describe the anatomy of the mouth, teeth, tongue and salivary glands	K	Face to face		Synchronou s Lecturing	Written exam	28- A2, A3	
1.6	<b>Histology</b> Upper digestive tract histology	Describe the histologic structure of the lips, tongue and salivary glands	K	Face to face		Synchronou s Lecturing	Written exam	28-A1	
1.7	<b>Anatomy</b> Palate and pharynx	Recognize the anatomy of the hard palate, soft palate along with the anatomy of the pharynx and the palatine tonsils	K	Blended	Moodle	Asynchronou s Lecturing	Written exam/ Online activities and assignments/ Discussion session	28- A2, A3	
1.8	<b>Anatomy</b> LAB-1	Label the anatomical land marks of the oral cavity, tongue, palate, pharynx and salivary glands	K S C	Face to face		Synchronou s Lecturing	Written exam	28-A2-3	
1.9	<b>Pathology</b> Esophageal diseases	Describe the mechanical and functional causes of obstruction, discuss the esophageal varices and their causes. List the causes of esophagitis and analyze their clinical importance and recognize esophageal tumors.	K S	Blended	Moodle	Asynchronou s Lecturing	Written exam/ Online activities and assignments/ Discussion session	28-A6	
1.10	<b>Pathology</b> Gastric diseases- 1	Describe the pathogenesis of acute gastritis and acute gastric ulcers. Recognize the major types of chronic gastritis including H pylori	K S	Face to face		Synchronou s Lecturing	Written exam/	28-A6	

			and autoimmune gastritis.. Analyze clinical scenarios							
1.1 1	<b>Pathology</b> Gastric diseases-2		Discuss the pathogenesis and causes of peptic ulcer disease. Recognize the common forms of gastric tumors, their pathogenesis and their microscopic characteristics	<b>K</b> <b>S</b>	<b>Blended</b>	<b>Moodle</b>	<b>Asynchronous Lecturing</b>	<b>Written exam/ Online activities and assignments/ Discussion session</b>	<b>28-A6</b>	
1.1 2	<b>Microbiology</b> Human microbiota and mucosal immunity		Describe the composition and role of normal microbiota in maintaining gut health and preventing pathogenic colonization.	<b>K</b>	<b>Blended</b>	<b>Moodle</b>	<b>Asynchronous Lecturing</b>	<b>Written exam/ Online activities and assignments/ Discussion session</b>	<b>28-A8</b>	
1.1 3	<b>Microbiology</b> Gram + & spore former bacterial infection		Identify and classify the major microbial populations present in food poisoning furthermore to Propose preventive measures	<b>K</b>	<b>Face to face</b>		<b>Synchronous Lecturing</b>	<b>Written exam</b>	<b>28-A8</b>	
1.1 4	<b>Microbiology</b> Enteric G-bacterial infection of the Gastrointestinal tract 1		Recognize and differentiate between common pathogenic microorganisms associated with gastrointestinal infections, such as Salmonella, Escherichia coli, and Helicobacter pylori.	<b>K</b>	<b>Face to face</b>		<b>Synchronous Lecturing</b>	<b>Written exam</b>	<b>28-A8</b>	



Week	Lecture	Topic	Student Learning Outcome (SLO)	Descriptor**	Methods (Face to Face/Blended/ Fully	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
2	2.1	<b>Anatomy</b> Anatomy of inguinal canal	Recognize the boundaries of the inguinal canal and it's content. Student should discuss and recognize inguinal hernia.	<b>K</b> <b>S</b>	Face to face		Synchronous Lecturing	Written exam	28- A2, A3
	2.2	<b>Anatomy</b> Abdominal wall	List the layers of the abdominal wall along with muscles of the abdominal wall and the describe the anatomy of the rectus sheath	<b>K</b>	Face to face		Synchronous Lecturing	Written exam	28- A2, A3
	2.3	<b>Anatomy</b> Anatomy of peritoneum	Recognize the anatomy of mesentery and omentum along with Intraperitoneal organs and Retroperitoneal and Interperitoneal organs. Describe the Peritoneal pouches, ligaments and gutters.	<b>K</b>	Face to face		Synchronous Lecturing	Written exam	28- A2, A3
	2.4	<b>Anatomy</b> LAB-2	Label the anatomical landmarks of the inguinal canal and its contents, the muscles of the abdominal wall and the rectus sheath. Outline the contents of the peritoneum, retroperitoneum and the	<b>K</b> <b>S</b> <b>C</b>	Face to face		Synchronous Lecturing	Written exam	28-A2-3

		mesentery, peritoneal pouches and ligaments.							
2.5	<b>Physiology</b> GIT secretions-3	Recognize the liver (hepatic) secretions and describe their control	K	Face to face		Synchronou s Lecturing	Written exam	28-A5	
2.6	<b>Physiology</b> digestion and absorption-1	Discuss the digestion and absorption of carbohydrate, proteins, and lipid.	K	Face to face		Synchronou s Lecturing	Written exam	28-A5	
2.7	<b>Physiology</b> digestion and absorption-2	Discuss the absorption of water and electrolytes. Describe the absorption of Ca <sup>++</sup> , Fe <sup>++</sup> and vitamins, and introduction to body energy.	K	Face to face		Synchronou s Lecturing	Written exam	28-A5	
2.8	<b>Physiology</b> Metabolic rate and regulation of food intake	Describe the regulation of food intake and related metabolic abnormalities	K S	Face to face		Synchronou s Lecturing	Written exam	28-A5	
2.9	<b>Pathology</b> Diseases of the intestines 1	Discuss the different causes of intestinal obstruction and their clinical importance (intussusception, Hirschsprung disease). Discuss the pathogenesis and clinical importance of hemorrhoids. Describe different malabsorptive disorders and their microscopic findings.	K S	Face to face		Synchronou s Lecturing	Written exam	28-A6	
2.10	<b>Pathology</b> Diseases of the intestines 2	Recognize the chronic inflammatory	K	Face to face		Synchronou s Lecturing	Written exam	28-A6	

Week	Lecture	Topic	Student Learning Outcome (SLO)	Descriptor**	Methods (Face to Face/Blended/ Fully	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
			bowel diseases, their types, pathogenesis, clinical and microscopic differences.	S					
	2.1 1	<b>Pathology</b> Diseases of the intestines 3	Describe the different types of colonic polyps and their related hereditary syndromes. Differentiate the microscopic features of each type and their clinical importance.	K S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments/ Discussion session	28-A6
	2.1 2	<b>Microbiology</b> Enteric G-bacterial infection of the Gastrointestinal tract 2	Demonstrate proficiency in basic microbiological laboratory techniques relevant to the identification and characterization of gastrointestinal microorganisms	K S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments/ Discussion session	28-A8
	2.1 3	<b>Microbiology</b> Vibrio Campylobacter & H. pylori infections	Identify and classify the major microbial populations of vibrios , Campylobacter and H. pylori	k	Face to face		Synchronous Lecturing	Written exam	28-A8
	2.1 4	<b>Microbiology</b> Brucella, Leptospira, coxiella and Abdominal TB	Identify and recognize the major microbial populations of Brucella, Leptospira and Abdominal TB	K	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments/ Discussion session	28-A8
3	3.1	<b>Physiology</b> Lab 1	Analyze the measurement methods of the	K S	Face to face		Synchronous Lecturing	Written exam	28-A5

		metabolic rate calculation.	C						
3.2	<b>Pathology</b> Diseases of the intestines 4	Describe the pathogenesis, clinical presentation, macroscopic and microscopic findings of colon cancer.	K S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28- A6	
3.3	<b>Pathology</b> Diseases of the appendix	Discuss the pathogenesis and clinical features of acute appendicitis. Describe the microscopic findings. Recognize common tumors of the appendix. Evaluate different clinical scenarios of GI pathologies.	K S	Face to face		Synchronous Lecturing	Written exam	28- A6	
3.4	<b>Anatomy</b> Anatomy of esophagus and stomach	Describe parts of the esophagus and stomach. Discuss the Blood supply of esophagus and stomach along with venous drainage. Recognize the nerve supply of esophagus and stomach.	K	Face to face		Synchronous Lecturing	Written exam	28- A2, A3	
3.5	<b>Histology</b> Histology of lower digestive tract	Describe the histology of esophagus, stomach, small intestine, large intestine- and appendix.	K	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments/ Discussion session	28- A1	
3.6	<b>Anatomy</b> Anatomy of the small intestine	Discuss the anatomy of duodenum, jejunum and ileum. Discuss the Blood supply and	K	Face to face		Synchronous Lecturing	Written exam	28-A2-3	

			Venous drainage of small intestine. Discuss the Nerve supply of small intestine.							
	3.7	<b>Anatomy LAB-3</b>	Label the anatomical landmarks of lower GIT organs including the esophagus and stomach with their parts, vascular supply and nerves. Label anatomic landmarks of small intestine, pancreas, liver and gallbladder.	<b>K S C</b>				<b>Synchronous Lecturing</b>	<b>Written exam</b>	<b>28-A2-3</b>
	3.8	<b>Microbiology Parasitic infections of the gastrointestinal tract 1</b>	Describe the complex interactions between parasites and the gastrointestinal tract	<b>K</b>				<b>Synchronous Lecturing</b>	<b>Written exam</b>	<b>28-A8</b>
	3.9	<b>Microbiology Parasitic infections of the gastrointestinal tract 2</b>	Recognize and differentiate between common parasitic microorganisms associated with gastrointestinal infections	<b>K</b>				<b>Asynchronous Lecturing</b>	<b>Written exam/ Online activities and assignments</b>	<b>28-A8</b>
<b>Week</b>	<b>Lecture</b>	<b>Topic</b>	<b>Student Learning Outcome (SLO)</b>	<b>Descriptors**</b>	<b>Learning Methods (Face to Face/Blended/Blended)</b>	<b>Platform</b>	<b>Synchronous / Asynchronous Lecturing</b>	<b>Evaluation Methods</b>	<b>Resources</b>	
4	4.1	<b>Anatomy Anatomy of the Large intestine</b>	Describe the anatomy of cecum and appendix. Describe the anatomy of ascending, transverse, descending colon, sigmoid, rectum and anal canal.	<b>K</b>				<b>Asynchronous Lecturing</b>	<b>Written exam/ Online activities and assignments</b>	<b>28-A2-3</b>

		Discuss the Blood supply and Venous drainage of large intestine. Discuss the Nerve supply of large intestine.							
4.2	<b>Anatomy</b> Anatomy of the liver, gallbladder, spleen and pancreas	Describe the anatomy of the liver, gallbladder, pancreas, biliary tract and spleen. Discuss their blood supply, venous drainage and innervation	K	Face to face		Synchronou s Lecturing	Written exam	28-A2-3	
4.3	<b>Histology</b> Histology of the liver, gallbladder and pancreas	Review microscopic sections from the liver gallbladder and pancreas	K S	Face to face		Synchronou s Lecturing	Written exam/ Online activities and assignments	28-A1	
4.4	<b>Anatomy LAB-4</b>	Label the anatomical landmarks of the large intestines, cecum and colon, appendix, and posterior abdominal wall.	K S C	Face to face		Synchronou s Lecturing	Written exam	28-A2-3	
4.5	<b>Histology lab-1</b>	Examine a set of microscopic slides and light microscopic images of the upper gastrointestinal organs including oral cavity, tongue , palate , pharynx and salivary glands.	K S C	Face to face		Synchronou s Lecturing	Written exam	28-A2-3	
4.6	<b>Pathology</b> Changes and definitions in liver diseases	Describe different definitions in liver diseases. Evaluate microscopic changes that occur in the liver during different liver	K S	Face to face		Synchronou s Lecturing	Written exam	28-A6	

		diseases including cholestasis, steatosis, and jaundice							
4.7	<b>Pathology</b> Liver cirrhosis	Recognize microscopic and macroscopic changes that occur in the liver in cirrhosis	K	Face to face		Synchronou s Lecturing	Written exam	28-A6	
4.8	<b>Pathology</b> Chronic hepatitis	Recognize pathologic findings in viral and autoimmune hepatitis and drug induced liver disease.	K	Face to face		Synchronou s Lecturing	Written exam	28-A6	
4.9	<b>Microbiology</b> Viral gastroenteritis	Identify and characterize viral pathogens that cause gastroenteritis with a focus on transmission routes, epidemiological significance, signs and symptoms, as well as management	K S C	Blended	Moodle	Asynchro us Lecturing	Written exam/ Online activities and assignments	28-A9	
4.10	<b>Pharmacology</b> Management of peptic ulcer	List the drugs that are used to treat peptic ulcer disease, nomenclature, classification, pharmacokinetics and adverse reactions	K S	Face to face		Synchronou s Lecturing	Written exam	28-A7	
4.11	<b>Pharmacology</b> Laxatives	List the drugs that are used as laxatives, nomenclature, classification, pharmacokinetics and adverse reactions	K S	Blended	Moodle	Asynchro us Lecturing	Written exam/ Online activities and assignments	28-A7	
4.12	<b>Pharmacology</b> Antidiarrheal drugs	List the drugs that are used to treat diarrhea, nomenclature, classification,	K	Blended	Moodle	Asynchro us Lecturing	Written exam/ Online activities and	28-A7	

Week	Lecture	Topic	Student Learning Outcome (SLO)	Descriptors**	Learning Methods (Face to Face/Blended/Blended Online)	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
			pharmacokinetics and adverse reactions	S				assignments	
5	5.1	Microbiology Viral hepatitis -1	Recognize viral hepatitis A and E infections, epidemiology, pathogenesis, modes of transmission, clinical manifestations, diagnostic approaches and preventive measures.	K S	Face to face		Synchronous Lecturing	Written exam	28-A8
	5.2	Microbiology Viral hepatitis -2	Recognize viral hepatitis B, C and D infections, epidemiology, pathogenesis, modes of transmission, clinical manifestations, diagnostic approaches and preventive measures.	K S	Face to face		Synchronous Lecturing	Written exam	28-A8
	5.3	Anatomy Anatomy of the posterior abdominal wall-1	Review the Muscles of the posterior abdominal wall. Recognize the Abdominal aorta and its branches. Recognize the Inferior vena cava and its tributaries. Review the Lymphatic drainage of the posterior	K	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28-A2-3



			abdominal wall.							
	5.4	<b>Anatomy</b> Anatomy of the posterior abdominal wall-2	Recognize the Lumber plexus and Sympathetic chain. Review the Blood vessels in the posterior abdominal wall.	<b>K</b>		<b>Face to face</b>		<b>Synchronou s Lecturing</b>	<b>Written exam</b>	<b>28-A2-3</b>
	5.5	<b>Embryology</b> Development of salivary glands and foregut and abnormalities of foregut	Describe the embryologic Development of the salivary glands, pharynx, tongue, esophagus, stomach, pancreas, duodenum and liver.	<b>K</b>		<b>Face to face</b>		<b>Synchronou s Lecturing</b>	<b>Written exam</b>	<b>28-A4</b>
	5.6	<b>Anatomy LAB-5</b>	Label the anatomical landmarks of the large intestines, sigmoid and rectum and anal canal. Label the nervous system of posterior abdominal wall liver, pancreas and spleen	<b>K S C</b>		<b>Face to face</b>		<b>Synchronou s Lecturing</b>	<b>Written exam</b>	<b>28-A2-3</b>
	5.7	<b>Histology lab-2</b>	Examine a set of microscopic slides and light microscopic images of the lower GIT organs (esophagus, stomach and intestines) and their associated organs liver, pancreas and spleen evaluating their normal	<b>K S C</b>		<b>Face to face</b>		<b>Synchronou s Lecturing</b>	<b>Written exam</b>	<b>28-A2-3</b>

			histology.							
5.8	<b>Pathology</b> Fatty liver disease	Describe alcoholic and nonalcoholic fatty liver disease and steatohepatitis, clinical features, pathogenesis and microscopic changes	<b>K</b> <b>S</b>	<b>Face to face</b>		<b>Synchronou s Lecturing</b>	<b>Written exam</b>	<b>28-A6</b>		
5.9	<b>Pathology</b> Metabolic liver disease	Describe the pathologic findings and clinical manifestations of hemochromatosis and Wilson disease	<b>K</b> <b>S</b>	<b>Face to face</b>		<b>Synchronou s Lecturing</b>	<b>Written exam</b>	<b>28-A6</b>		
5.10	<b>Clinical-1</b> Upper and lower GIT bleeding	Analyze and present clinical cases of upper and lower gastrointestinal bleeding, discuss its causes, importance of history , physical examination , endoscopic findings , lab investigations and differences in management . Discuss important terms associated with bleeding (melena, hematemesis, hematochezia) .	<b>C</b>	<b>Blended</b>	<b>Moodle</b>	<b>Asynchronou s Lecturing</b>	<b>Written exam/ Online activities and assignments</b>			
5.11	<b>Pharmacology</b> Antispasmodic s drugs	List the drugs that are used as antispasmodics, nomenclature, classification, pharmacokinetics and adverse reactions	<b>K</b> <b>S</b>	<b>Face to face</b>		<b>Synchronou s Lecturing</b>	<b>Written exam</b>	<b>28-A7</b>		
5.12	<b>Pharmacology</b> Antiemetic drugs	List the drugs that are used as antiemetics,	<b>K</b>	<b>Blended</b>	<b>Moodle</b>	<b>Asynchronou s Lecturing</b>	<b>Written exam/ Online</b>	<b>28-A7</b>		

Week	Lecture	Topic	Student Learning Outcome (SLO)	Descriptors**	Learning Methods (Face to Face/Blended/	Platform	Synchronous / Asynchronous Lecturing	Evaluation Methods	Resources
			nomenclature, classification, pharmacokinetics and adverse reactions	S				activities and assignments	
6	6.1	Physiology Lab 2	Analyze the methods of recording intestinal movements and the effects of neurotransmitters	K S C	Face to face		Synchronous Lecturing	Written exam/	28-A5
	6.2	Embryology Development of midgut and abnormalities	Describe the embryologic Development of small intestine and large intestine. Discuss the Rotation of the intestine.	K	Face to face		Synchronous Lecturing	Written exam	28-A4
	6.3	Embryology Development of hindgut and abnormalities of hindgut	Describe the development of the cloaca, rectum and anal canal, and discuss abnormalities of their development	K S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28-A4
	6.4	Microbiology lab -1	Apply theoretical and practical knowledge in microbiologic diagnosis of bacterial infections and interpretation of findings .	K S C	Face to face		Synchronous Lecturing	Written exam	28-A8
	6.5	Microbiology lab -2	Apply theoretical and practical knowledge in microbiologic diagnosis of parasitic infections and interpretation of	K S C	Face to face		Synchronous Lecturing	Written exam	28-A8

			findings.						
6.6	<b>Clinical-2</b> Chronic liver disease (cirrhosis)	Analyze and evaluate clinical cases of chronic liver disease and cirrhosis. Describe etiologies, risk factors, clinical manifestations, and complications (portal hypertension, varices, HCC, ascites, encephalopathy. Interpret common laboratory tests findings.	<b>C</b>	<b>Blended</b>	<b>Moodle</b>	<b>Asynchronous Lecturing</b>	<b>Written exam/ Online activities and assignments</b>		
6.7	<b>Pathology</b> Gallbladder and pancreas	Recognize the different diseases of the gallbladder including gallstones, cholecystitis and tumors, their pathologic and clinical findings. Discuss pancreatic anomalies, chronic pancreatitis and benign tumors.	<b>K</b>	<b>Face to face</b>		<b>Synchronous Lecturing</b>	<b>Written exam</b>	<b>28-A6</b>	
6.8	<b>Pathology</b> Hepatic tumors	Discuss different benign and malignant tumors of the liver, including their clinical presentation, pathogenesis and morphologic appearance.	<b>K</b>	<b>Blended</b>	<b>Moodle</b>	<b>Asynchronous Lecturing</b>	<b>Written exam/ Online activities and assignments</b>	<b>28-A6</b>	

	6.9	<b>Pharmacology</b> Anti-viral drugs	List the drugs that are used as antivirals, nomenclature, classification, pharmacokinetics and adverse reactions	K S	Blended	Moodle	Asynchronous Lecturing	Written exam/ Online activities and assignments	28-A7
** K: Knowledge, S: Skills, C: Competency									

#### 24. Evaluation Methods:

Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	SLOs	Descriptors**	Period (Week)	Platform
Midterm exam	40	Anatomy, Histology, physiology, microbiology and pathology	1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.9, 1.10, 1.11, 1.12, 1.13, 1.14, 2.1, 2.2, 2.3, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 2.14, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.9	K S	End of third week	Paper based exam
Online assignments, activities	5	All blended topics	1.7, 1.9, 1.11, 1.12, 2.11, 2.12, 2.14, 3.2, 3.5, 3.9, 4.1, 4.9, 4.11, 4.12, 5.3, 5.10, 5.12, 6.3, 6.6, 6.8, 6.9.	K S C	1 <sup>st</sup> -6 <sup>th</sup> week	Moodle
Practical	20	Histology,	1.8, 2.4, 3.1, 3.7, 4.4,	S	End of sixth	Paper based

		Anatomy Physiology, microbiology, pathology	4.5, 5.6, 5.7, 6.1, 6.4, 6.5.	C	week	exam
Final exam	35	Physiology, pathology, biochemistry, pharmacology, microbiology, clinical	4.1, 4.2, 4.3, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11, 4.12, 5.1, 5.2, 5.3, 5.4, 5.5, 5.8, 5.9, 5.10, 5.11, 5.12, 6.2, 6.3, 6.6, 6.7, 6.8, 6.9	K S C	End of sixth week	Paper based exam
** K: Knowledge, S: Skills, C: Competency						

## 25. Course Requirements

- ✓ Class room Lectures
- ✓ Internet connection
- ✓ Online educational material using Moodle (Electronic Videos and Activities)
- ✓ Histology and physiology Lab sessions

## 26. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

- ✓ Class room Lectures
- ✓ Interactive Videos and Animations
- ✓ Online activities and assignments
- ✓ Laboratory sessions
- ✓ Discussion sessions and forums
- ✓ Game- based learning

## 27. Course Policies:

### A- Attendance policies:

Attendance will be monitored by the course coordinator. Attendance policies will be announced at the beginning of the course.

### B- Absences from exams and handing in assignments on time:

Will be managed according to the University of Jordan regulations. Refer

to <http://registration.ju.edu.jo/Documents/daleel.pdf>

**C- Health and safety procedures:**

Faculty Members and students must at all times, conform to Health and Safety rules and procedures.

**D- Honesty policy regarding cheating, plagiarism, misbehavior:**

As a student in this course (and at this university) you are expected to maintain high degrees of professionalism, commitment to active learning and participation in this course and also integrity in your behavior in and out of the classroom. Students violate this policy would be subjected to disciplinary action according to University of Jordan disciplinary policies

**E- Grading policy:**

Grade-point average, Rules are preset by the Faculty and Department Councils

**F- Available university services that support achievement in the course:**

Availability of comfortable lecture halls, data show, internet service and E learning website  
<https://elearning.ju.edu.jo/>.

**28. References:**

**A- Required book (s), assigned reading and audio-visuals:**

1. Junqueira's Basic Histology, Text and Atlas by Anthony L. Mescher, 15<sup>th</sup> edition.
2. Gray's Anatomy: The Anatomical Basis of Clinical Practice
3. Snell clinical anatomy by system, richards.snell, 10th edition.
4. Langman's medical embryology, 12<sup>th</sup> edition.
5. Guyton and Hall Textbook of Medical Physiology (Guyton Physiology) by byJohn E. Hall, 14<sup>th</sup> edition.
6. Robbins & Cotran Pathologic Basis of Disease, 11th edition, Kumar, Abbas, Aster.
7. Craig, CR. & Stitzel, RE: Modern Pharmacology with clinical applications, sixth edition.
8. Jawetz, Melnick, and Adelberg's medical microbiology, 28<sup>th</sup> edition
9. Harrison's infectious diseases, 3<sup>rd</sup> edition, section 5, viral infections chapter 98

**B- Recommended books, materials, and media:**

Web based resources: <http://www.histologyguide.org/index.html>, <https://webpath.med.utah.edu/>

**29. Additional information:**

Name of Course Coordinator: **Dr Manar Hajeer,**

Date: 1/1/2024

Signature: -----

Head of Department:

Signature: -----

Head of Curriculum Committee/Faculty: **Prof. Dr. Yaser Rayyan**

Signature:

Dean: **Prof. Dr. Yaser Rayyan**

Signature: -----