



GOVERNMENT OF JAMMU & KASHMIR  
SHER-I-KASHMIR INSTITUTE OF MEDICAL SCIENCES  
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**Syllabus for Assistant Professor Posts of  
the Department of Gastroenterology,  
SKIMS, SOURA.**

# Gastroenterology

Curriculum / Syllabus

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## Basic Sciences

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- Immune system of the gastrointestinal tract (GIT) and its importance in various GI disorders
- Molecular biology in relation to the GIT
- Genetic diseases of the GIT and the liver
- Gene therapy
- GI tumors and tumor biology
- Gastrointestinal hormones in health and diseases
- Embryology of the gut, liver, pancreas and congenital anomalies

## Miscellaneous

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- Upper and lower gastrointestinal bleeding
- Gastrointestinal tuberculosis
- HIV and the GIT, hepatobiliary and pancreatic systems
- GIT and liver in systemic diseases
- Cutaneous manifestations of GI diseases
- Vascular diseases of the GIT
- Gastrointestinal side effects of drugs, especially NSAIDs
- Gastrointestinal symptoms, physiology and interpretation: Nausea, vomiting
- Pain abdomen, Diarrhoea, Constipation, Dysphagia, Jaundice

## Esophagus

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- Basic anatomy, histology and physiology
- Congenital anomalies
- Motility of the esophagus and motor disorders
- Mechanism of deglutition and dysphasia
- Approach to a patient with dysphasia
- Gastro-oesophageal reflux disease
- Tumours of the oesophagus
- Oesophageal webs, membranes and diverticulum
- Management of benign and malignant oesophageal strictures
- Oesophagus and systemic diseases
- Infectious diseases of the oesophagus
- Foreign bodies in the oesophagus and stomach
- Esophageal perforation



- Drug-induced esophagitis

## **Stomach**

- Anatomy, histology, functions
- Physiology of acid and bicarbonate secretion in health and diseases
- Defense mechanisms against acid and pepsin
- Gastroduodenal motor function in health and disease.
- Gastritis (nonspecific and specific)
- Helicobacter pylori infection
- Peptic ulcer
- Dyspepsia
- Stress and stomach
- Gastric hypersecretory states, including Zollinger Ellison syndrome
- Ulcer complications and their management
- Surgery for a peptic ulcer
- Post-gastrectomy complication
- Bezoars
- Tumours of the stomach
- Diverticuli and hernia of the stomach

## **Small Intestine**

- Anatomy, blood supply, histology
- Motility of the small intestine
- Congenital anomalies
- Normal absorption of the nutrients
- Intestinal electrolyte absorption and secretion
- Malabsorption syndromes
- Pathophysiology, manifestations and approach
- Celiac sprue
- Infection-related diseases
- Intestinal microflora in health and diseases
- Tropical sprue
- Whipple's disease
- Infectious diarrhoea and food poisoning
- Parasitic diseases
- Small intestinal ulcers
- Short bowel syndrome and intestinal transplantation.
- Eosinophilic gastroenteritis
- Food allergies
- Intestinal obstruction and pseudo-obstruction

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- Short bowel syndrome
- Acute appendicitis
- Malrotation of the gut
- Bezoars
- Management of diarrhoea
- GI lymphomas
- Small intestinal tumors
- Small intestinal transplantation

## Colon

- Basic anatomy, blood supply, histology and functions
- Motility of the colon and disorders of motility
- Congenital anomalies
- Megacolon
- Constipation
- Colonic pseudo-obstruction
- Fecal incontinence
- Antibiotic-associated diarrhoea
- Inflammatory bowel disease
- Ulcerative colitis
- Crohn's disease
- Indeterminate colitis
- Ileostomies and their management
- Diverticular disease of the colon
- Radiation enterocolitis
- Colonic polyps and polyposis syndromes
- Malignant diseases of the colon
- Other inflammatory diseases of the colon including
- Solitary rectal ulcer syndrome
- Diversion colitis
- Collagenous and microscopic colitis
- Non-specific ulcerations of the colon
- Malakoplakia
- Pneumatosis cystoides intestinalis
- Hemorrhoids
- Diseases of the anorectum

## Pancreas

- Anatomy, physiology, blood supply, and developmental anomalies
- Physiology of the pancreatic secretion

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- Pancreatic function tests
- Acute pancreatitis
- Recurrent acute pancreatitis
- Chronic pancreatitis
- Malignancies of the pancreas (Exocrine and endocrine)
- Cystic fibrosis and other childhood disorders of the pancreas
- Hereditary pancreatitis
- Pancreatic transplantation

## Biliary Tree

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- Anatomy, Physiology
- Physiology of bile formation and excretion
- Enterohepatic circulation
- Bilirubin metabolism.
- Approach to a patient with jaundice
- Gallstones, their complications, and management
- Acute a calculous cholecystitis
- Miscellaneous disorders of the gallbladder
- Acute cholangitis
- Benign biliary structure
- Benign and malignant neoplasms of the biliary system.
- Endoscopic management of biliary obstruction.
- Motility and dysmotility of the biliary system and sphincter of Oddi dysfunction
- Congenital diseases of the biliary systems

## Liver

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- Anatomy, physiology and blood supply
- Functions of the liver
- Microcirculation of the liver
- Liver function tests
- Portal hypertension
- Extrahepatic portosplenic vein obstruction
- Non-cirrhotic portal fibrosis
- Cirrhosis
- Acute viral hepatitis
- Chronic hepatitis
- Fulminant hepatic failure
- Subacute hepatic failure
- Cirrhosis of the liver
- Ascites



- Hepatorenal syndrome
- Autoimmune liver disease
- Metabolic liver disease
- Sclerosing cholangitis-primary and secondary
- Primary biliary cirrhosis
- Hepatic venous outflow tract obstruction
- Fibrocystic diseases of the liver
- Wilson's disease
- Hemochromatosis
- Liver in porphyria
- Hepatic tumors
- Infections of the liver
- Liver in pregnancy
- Liver in congestive heart failure
- Liver biopsy
- Liver transplantation and artificial liver support
- Non-Alcoholic Steatohepatitis (NASH)
- Metabolic Associated Steatotic Liver Disease (MASLD)

### **Peritorium and Retroperitoneum**

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- Ascites
- Chronic peritonitis
- Budd-Chiari syndrome
- Malignant ascites
- Diseases of the retroperitoneum

### **Nutrition**

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- Normal nutritional requirements
- Assessment of nutritional status
- Protein energy malnutrition
- Manifestations and management of nutritional deficiency and excess
- Nutritional support in various GI disorders (malabsorption, acute and chronic pancreatitis, inflammatory bowel disease)

### **Vascular Diseases of the GI Tract: GI Radiology**

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- Reading and interpreting the common X-ray films, including
- X-ray films of the abdomen
- Barium studies, ultrasound examination
- CT scans, MR scans, angiography and ERCP films

## **GI Pathology**

- Reading and interpreting histological slides of common gastrointestinal and liver diseases.

## **Endoscopic Equipment & Electrosurgical System**

Endoscopic training is an integral part of training in the super specialty of gastroenterology. A person is supposed to know instruments and its application.

- Endoscopes
- Accessories
- Sterilization of endoscopes and accessories
- Electrosurgical instrument
- Keeping of endoscopes and accessories
- Basic Endoscopic procedures, Do's and Don'ts, complications, and management of complications

## **Recent Advances**

- Artificial Intelligence in Endoscopy
- Microbiome based therapies
- Precision oncology in GI Cancers.

