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| **Course title** | **Code** | **Semester** | **Type of course** | **Course volume (Contact hours)** | **ECTS** |
| **Gastrointestinal System and Metabolism Disorders** | **MED****2004** | **IV** | **Mandatory** | **66**  | **5** |
| **Faculty, the educational program and level of education** | * School of Medicine and Health Sciences
* Higher Medical Educational Program “Medicine”
* One cycle 6-year
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| **Learning Course Content** |
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| * **BIOCHEMISTRY** Lipid metabolism disorders

Carbohydrate metabolism disorders:Glycolytic enzyme deficincies; disorders:abnormalities of gluconeogenesis; glycogen storage diseasesLiver Function tests,Detoxification mechanismsBiochemistry lab: Measurement ALT and AST in serum* **CL. MICROBIOLOGY** Enterobacteriaceae: Vibrio and Aeromonas, Campylobacter and Helicobacter, Sallmonella, Shigella, E. coli;

Rotaviruses; Hepatitis A Virus; Noroviruses; Hepeviruses (HEV)Intestinal protozoa. Sarcodina (amebas), Sporozoa (sporozoans), Mastigospora (flagellates), Ciliata (ciliates).Metazoa: Platyhelmints(flatworms); Nemathelmints (roundworms, nematodas ). Platyhelminthes : Cestoda (tapeworms), Trematoda (flukes).* **PATHOLOGY** Pathologies of oral cavity and diseases of salivary glands ; Pathology of esophagus; Pathology of stomach, Gastritis, Peptic Ulcer.

Patologies of small and large intestine, enterocolitis ; Diseases of appendix and peritoneum ; Malabsorption Syndrome; Inflammatory intestinal diseases.Liver pathology; Cirrhosis ; Hepatitis;Diseases of biliary system and gallbladder;Gastrointestinal system tumors; Pathology lab* **Pathophysiology (GASTROENTEROLOGY)** Signs and Symptoms in Gastrointestinal Disease - Abdominal Pain & Acute Abdomen (pathophysiology); Signs and Symptoms in Gastrointestinal Disease - Vomiting, Diarrhea (pathophysiology); Constipation, Incontinance (pathophysiology); Jaundice (pathophysiology); Signs and Symptoms in Gastrointestinal Disease - Gastrointestinal Bleeding .

Esophagus and Diaphragmatic Hernia - Surgical anatomy; Pathophysiology of disorders of of the esophagus; Esophagus carcinoma and surgery; Stomach - Surgical anatomy & physiology; Pathophysiology of Small Bowel Diseases .Pathophysiology of disorders of the stomach; Pathophysiology of Small Bowel Diseases, Colon, Rectum and Anus; Pathophysiology of Disorders of Colon.Pathology of exocrine pancreas diseases;Liver (structure&function); LİVER; PATHOPHYSIOLOGY OF SELECTED LIVER DISEASES (Acute hepatitis; Chronic Hepatitis);PATHOPHYSIOLOGY OF SELECTED LIVER DISEASES (cirrhosis); Gallbladder and the Extrahepatic Biliary System ; Pancreas; Pathophysiology of selected exocrine pancreas diseases (Acute pancreatitis); Pathophysiology of selected exocrine pancreas diseases (Chronic pancreatitis).* **PHARMACOLOGY**  Drugs Used in gastroenterology - antiemetic; pharmacotherapy of GERD and peptic ulcer disease; short review of liver , gallbladder and pancreas treatment

pharmacotherapy of bowel movement disorders (constipation and diarrhea) ; IBS and IBD treatmentintroduction to toxicology ; heavy metal intoxication , chelators; management of the poisoned patients ;* **RADIOLOGY** Radiology and disorders of Esophagus, Stomach And Duodenum Radiology and disorders of Small and Large Bowel. Radiology and disorders of Hepatobiliary System.Radiology and disorders of Pancreas and Spleen
* **TOPOGRAPIC ANATOMY** Abdomen-I: Regio abdominalis anterior, Regio abdominalis lateralis;Regio inguinalis

Abdomen-II: Cavitas abdominalis, Peritoneum;Bursa omentalisAbdomen-III: Gut; Duodenum;Pancreas, LspleenAbdomen-IV: Hepar, Vesica fellea,Truncus coeliacus;Intestenum tenue, Intestenum crassum |

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| **Textbooks and Materials** |

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| * Pathology

Robbins Basic Pathology-Vinay Kumar; Abul K. Abbas; Elsevier; 10th. ed. 2018Elsevier's Integrated Pathology- King C. Thomas; Mosby Elsevier; 2007;* Topographic Anatomy

Clinically Oriented Anatomy- Moore, Keith L; Wolters Kluwer; 9th.ed. 2023;* Medical Microbiology

Medical Microbiology- Murray, Patrick R; Rosenthal, Ken S; 9th ed. Elsevier Sounder; 2021.Case Studies in Infectious Disease- Peter Lydyard; Garland Science; 2010;* Pharmacology

Basic & Clinical Pharmacology: A lange medical book- Katzung, Bertram G; Mc- Graw Hill Education. 15th. ed; 2021.Lippincott Illustrated Reviews: Pharmacology- Karen Whalen; Wolter Kluwer; South Asian ed. 2019;* Biochemistry

Biochemistry: Lippincott's illustrated Reviews- Ferrier Denice R; Wolters Kluwer; 7th ed. 2017.Color Atlas of Biochemistry-Jan Koolman; Klaus-Heinrich Roehm; Thieme; 3rd.ed. 2013;* Radiology

Grainger & Allison's diagnostic radiology: a textbook of medical imaging AndyAdam;Churchill Livingstone; 6th ed; 2015Introduction to Radiologic imaging sciences &patient care-Arlene M.Adler;Richard R.Carlton; Elsevier Saunders; 6th ed; 2016;* Clinical skills- Nursing skills

clinical Nursing skills&techniques- Anne Griffin Perry, Patricia A. Potter; Elsevier Mosby; 10th ed;2022.Taylor’s Clinical Nursing Skills: a nursig process approoach-Pamela Lynn; Wolters Kluwer ;9th ed.; 2023.* Introduction to Pharmacology-Mary K.Asperheim;Justin Favaro; Elsevier Sounder. 12th.ed; 2012;
* Essentials of Medical Pharmacology-KD Tripathi; Jaypee Brothers Medical Publishers; 5th ed. 2003;
* Roitt’s Essential Immunology- Delves, Peter J; Martin,Seamus J; Wiley –Blackwell; 12th.ed. 2011;
* Medical Microbiology: A guide to microbial infections:Pathogenesis,Immunity,Laboratory Diagnosis and Control- David Greenwood;Mike Barer; Churchill Livingstone; 18th.ed. 2012;
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