

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION

**Federal State Autonomous Educational Institution of Higher Education
«National Research Lobachevsky State University of Nizhny Novgorod»**

Институт клинической медицины

УТВЕРЖДЕНО

решением Ученого совета ННГУ

протокол № 10 от 02.12.2024 г.

Working programme of the discipline

Hospital surgery, pediatrics surgery

Higher education level

Specialist degree

Area of study / speciality

31.05.01 - General Medicine

Focus /specialization of the study programme

General Medicine

Mode of study

full-time

Nizhny Novgorod

Year of commencement of studies 2025

1. Место дисциплины в структуре ОПОП

Дисциплина Б1.О.44 Госпитальная хирургия, детская хирургия относится к обязательной части образовательной программы.

2. Планируемые результаты обучения по дисциплине, соотнесенные с планируемыми результатами освоения образовательной программы (компетенциями и индикаторами достижения компетенций)

Формируемые компетенции (код, содержание компетенции)	Планируемые результаты обучения по дисциплине (модулю), в соответствии с индикатором достижения компетенции		Наименование оценочного средства	
	Индикатор достижения компетенции (код, содержание индикатора)	Результаты обучения по дисциплине	Для текущего контроля успеваемости	Для промежуточной аттестации
УК-1: Способен осуществлять критический анализ проблемных ситуаций на основе системного подхода, вырабатывать стратегию действий	УК-1.1: Анализирует задачу, выделяя ее базовые составляющие УК-1.2: Находит и критически анализирует необходимую информацию и критически рассматривает возможные варианты решения задачи. УК-1.3: Грамотно, логично, аргументированно формирует собственные суждения и оценки УК-1.4: Определяет и оценивает последствия возможных решений задачи.	УК-1.1: Знает методы анализа проблемной ситуации как системы, выявляя ее составляющие и связи между ними УК-1.2: Умеет осуществлять поиск алгоритмов решения поставленной проблемной ситуации на основе доступных источников информации. Определять в рамках выбранного алгоритма вопросы (задачи), подлежащие дальнейшей детальной разработке. Предлагать способы их решения УК-1.3: Владеет методикой разработки стратегии достижения поставленной цели как последовательности шагов, предвидя результат каждого из них и оценивая их влияние на внешнее окружение планируемой деятельности и на	Тест	Экзамен: Контрольные вопросы Задачи Зачёт: Задачи Задания

		<p>взаимоотношения участников этой деятельности</p> <p>УК-1.4: Умеет определять и оценивать последствия возможных решений задачи</p>		
<p>ПК-3: Готовность к сбору и анализу жалоб пациента, данных его анамнеза, результатов осмотра, лабораторных, инструментальных, патолого-анатомических и иных исследований в целях распознавания состояния или установления факта наличия или отсутствия заболевания, проведение дифференциальной диагностики</p>	<p>ПК-3.1: Знать методы сбора анамнеза, жалоб, осмотра больного с терапевтической патологией для распознавания заболеваний, этиологию, патогенез, и клинику наиболее часто встречающихся заболеваний внутренних органов; современную классификацию, принципы и особенности основных методов клинических, лабораторных и инструментальных методов обследования, их диагностическое значение</p> <p>ПК-3.2: Уметь получить информацию о заболевании, интерпретировать жалобы, анамнез заболевания и жизни, данные, применить объективные методы обследования, выявить общие и специфические признаки заболевания; построить план обследования больного с учетом стандартов и интерпретировать дополнительные методы обследования (лабораторно-инструментальные) с учетом нормы</p> <p>ПК-3.3: Владеть методами сбора анамнеза, жалоб больного с терапевтической патологией; навыком составления плана дополнительного обследования больного; интерпретацией результатов лабораторных</p>	<p>ПК-3.1: Знает методы сбора анамнеза, жалоб, осмотра больного с терапевтической патологией для распознавания заболеваний. Этиологию, патогенез, и клинику наиболее часто встречающихся заболеваний внутренних органов; современную классификацию, принципы и особенности основных методов клинических, лабораторных и инструментальных методов обследования, их диагностическое значение.</p> <p>ПК-3.2: Умеет получить информацию о заболевании, интерпретировать жалобы, анамнез заболевания и жизни, данные, применить объективные методы обследования, выявить общие и специфические признаки заболевания; построить план обследования больного с учетом стандартов и интерпретировать дополнительные методы обследования (лабораторно-инструментальные) с учетом нормы.</p> <p>ПК-3.3: Владеет методами сбора анамнеза, жалоб больного с терапевтической патологией; навыком составления плана дополнительного обследования больного;</p>	Тест	<p>Экзамен: Контрольные вопросы Задачи</p> <p>Зачёт: Задачи Задания</p>

	и инструментальных исследований и проведения дифференциальной диагностики	интерпретацией результатов лабораторных и инструментальных исследований и проведения дифференциальной		
ПК-4: Готовность к определению у пациента основных патологических состояний, симптомов, синдромов заболеваний, нозологических форм в соответствии с Международной статистической классификацией болезней и проблем, связанных со здоровьем, X пересмотра	<p>ПК-4.1: Знать этиологию, патогенез заболеваний соответственно с Международной статистической классификацией болезней и проблем, связанных со здоровьем X пересмотра</p> <p>ПК-4.2: Уметь определить основные симптомы, синдромы нозологических форм заболеваний в соответствии с Международной статистической классификацией болезней и проблем, связанных со здоровьем X пересмотра</p> <p>ПК-4.3: Владеть навыками постановки диагноза на основании симптомов, синдромов нозологических форм заболеваний в соответствии с Международной статистической классификацией болезней и проблем, связанных со здоровьем X пересмотра</p>	<p>ПК-4.1: Знает этиологию, патогенез гинекологических заболеваний соответственно с Международной статистической классификацией болезней и проблем, связанных со здоровьем, X пересмотра.</p> <p>ПК-4.2: Умеет определить основные симптомы, синдромы нозологических форм гинекологических заболеваний в соответствии с Международной статистической классификацией болезней и проблем, связанных со здоровьем, X пересмотра.</p> <p>ПК-4.3: Владеет навыками постановки диагноза на основании симптомов, синдромов нозологических форм гинекологических заболеваний в соответствии с Международной статистической классификацией болезней и проблем, связанных со здоровьем, X пересмотра.</p>	Тест	<p>Экзамен: Контрольные вопросы Задачи</p> <p>Зачёт: Задачи Задания</p>
ПК-5: Готовность к определению тактики ведения пациентов с учетом возраста, с различными нозологическими формами (разработка плана лечения, назначение медикаментозных и немедикаментозных средств согласно	<p>ПК-5.1: Знать алгоритмы постановки диагноза и лечения и тактику ведения пациентов с различными нозологическими формами</p> <p>ПК-5.2: Уметь определять необходимую тактику ведения пациентов с различными нозологическими формами</p> <p>ПК-5.3: Владеть</p>	<p>ПК-5.1: Знает алгоритмы постановки диагноза и лечения и тактику ведения пациентов с различными нозологическими формами</p> <p>ПК-5.2: Умеет определять необходимую тактику ведения пациентов с различными</p>	Тест	<p>Зачёт: Задания Задачи</p> <p>Экзамен: Задачи Контрольные вопросы</p>

клиническим рекомендациям) в том числе оказание паллиативной медицинской помощи	алгоритмами постановки диагноза и лечения и навыком определения тактики ведения пациентов с различными нозологическими формами	нозологическими формами ПК-5.3: Владеет алгоритмами постановки диагноза и лечения и навыком определения тактики ведения пациентов с различными нозологическими формами		
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3. Структура и содержание дисциплины

3.1 Трудоемкость дисциплины

	очная
Общая трудоемкость, з.е.	9
Часов по учебному плану	324
в том числе	
аудиторные занятия (контактная работа):	
- занятия лекционного типа	30
- занятия семинарского типа (практические занятия / лабораторные работы)	136
- КСР	3
самостоятельная работа	119
Промежуточная аттестация	36 Экзамен, Зачёт

3.2. Содержание дисциплины

(структурированное по темам (разделам) с указанием отведенного на них количества академических часов и виды учебных занятий)

Наименование разделов и тем дисциплины	Всего (часы)	в том числе			
		Контактная работа (работа во взаимодействии с преподавателем), часы из них			Самостоятельная работа обучающегося, часы
		Занятия лекционного типа	Занятия семинарского типа (практические занятия/лабораторные работы), часы	Всего	
	0 Ф 0	0 Ф 0	0 Ф 0	0 Ф 0	0 Ф 0
Diseases and injuries of the organs of the neck and chest.	45	5	20	25	20
Diseases and injuries of abdominal organs	45	5	20	25	20
Coloproctology.	45	5	20	25	20
Purulent surgery.	45	5	20	25	20

Ambulatory surgery	52	5	27	32	20
Pediatric surgery.	53	5	29	34	19
Аттестация	36				
КСР	3			3	
Итого	324	30	136	169	119

Contents of sections and topics of the discipline

Contents of sections and topics of the discipline

Diseases and injuries of the organs of the neck and chest.

1.1 Surgical treatment of thyroid disease.

Thyrotoxicosis. Etiology. Pathogenesis. Clinic. Diagnostics and its methods. Treatment: conservative, radioisotope, surgical.

Endemic goiter. Classification. Etiology. Pathogenesis. Clinic of goiter. Prevention. Indications for surgery.

Types and scope of surgery. Nodular goiter. Etiology. Pathogenesis. Clinic. Diagnostics. Indications for surgery.

Pain relief. Types of surgery.

Chronic thyroiditis. Autoimmune thyroiditis Hashimoto.

Thyroid cancer. Precancerous diseases. Cancer classification. Features of metastasis. Clinic. Modern research methods. Choice of method and scope of surgery. Combined treatment, surgical, radioisotope, X-ray therapy, hormonal.

Surgical treatment of parathyroid gland diseases.

Hyperparathyroidism.

1.2 Thoracic surgery

Diseases of the lungs and pleura.

Suppurative diseases of the lungs and pleura. Abscess and gangrene of the lung. Pathogenesis. Classification. Clinic. Diagnostics. Puncture of the lung for diagnostic and therapeutic purposes; permanent drainage.

Conservative methods of treating abscess and gangrene. Therapeutic bronchoscopies. Indications for surgical treatment.

Bronchiectasis. Modern understanding of pathogenesis. Classification. Clinic. Roentgenoscopy. Radiography.

Bronchography. Tomography. Indications for surgical treatment.

Spontaneous pneumothorax. Etiology, pathogenesis, clinical picture, diagnostics, surgical tactics, surgical treatment (punctures, drainage, thoracotomy, thoracoscopy).

Pleurisy. Pleurisy and empyema of the pleura: etiology, pathogenesis, clinical features, diagnostics, surgical tactics, surgical treatment (punctures, drainage, thoracotomy, thoracoscopy).

Diseases of the mediastinum. Mediastinitis. Etiology, classification, clinical features, diagnostics, surgical treatment, types of operations (extrapleural, transpleural). Tumors of the mediastinum. Classification, clinical features, diagnostics, surgical tactics.

Diseases of the esophagus.

Hernias of the esophageal opening of the diaphragm. Classification, diagnostics, clinical features, treatment - conservative, surgical, minimally invasive techniques.

Trauma of the esophagus. Types of injury, classification, etiology, clinical features, diagnostics. Surgical tactics.

. Foreign bodies of the esophagus. Clinic, diagnostics, treatment.

Chemical burns of the esophagus. Bougienage of the esophagus. Gastrostomy in the treatment of diseases and injuries of the esophagus, types of gastrostomy.

1.3 Chest injuries.

Chest injuries mechanism, classification, types of pneumothorax. Pleuropulmonary shock. Mediastinal

emphysema. Hemothorax. Types, surgical tactics, conservative treatment, punctures, drainage. Thoracoscopy. Thoracotomy. Lung injuries. Classification, clinical picture, diagnostics, surgical tactics, thoracoscopy, thoracotomy, suturing, lung resection.

Heart injuries. Closed: cardiac contusion, clinical picture, diagnostics, treatment. Open heart wounds. Causes, clinical picture, diagnostics, surgical tactics, surgical approaches, suture of heart wound.

Rib fractures: single, multiple, comminuted, fenestrated.

Combined chest trauma. Types. Surgical tactics.

Diseases and injuries of abdominal organs.

Surgery of abdominal organs and diseases of the anterior abdominal wall.

Surgical diseases of the stomach and duodenum

Peptic ulcer. Complications of peptic ulcer. Perforation. Bleeding. Stenosis. Penetration. Malignancy. Internal fistulas.

Gastroduodenal bleeding of non-ulcer etiology. Conservative and endoscopic methods of treating peptic ulcer.

Stomach cancer. Epidemiology. Clinic. Diagnostic methods - endoscopic, radiological, ultrasound, laboratory. Pathways of metastasis. Classification of stomach cancer.

Stomach bezoars.

Surgical diseases of the intestine.

Diverticula of the duodenum and small intestine. Clinic. Diagnostics. Principles of surgical treatment.

Crohn's disease.

Acute intestinal obstruction Classification. Dynamic intestinal obstruction. Clinic of mechanical intestinal obstruction of the small intestine, large intestine, obstructive, strangulation, intussusception, adhesive.

Diagnostic methods - laboratory, radiological, endoscopic. Features of preoperative preparation of patients with acute intestinal obstruction. Surgical treatment. Surgical approaches. Features of abdominal cavity revision.

Types of surgical interventions for various localizations and forms of intestinal obstruction. Postoperative treatment of patients. Adhesive disease.

Acute appendicitis. Epidemiology. Classification. Clinic. Features of the disease course in atypical localizations of the vermiform appendix. Features of the course of acute appendicitis in children, elderly and senile people. Diagnostics. Differential diagnostics. Complications of acute appendicitis. Peritonitis. Appendicular infiltrate. Pylephlebitis. Abdominal abscesses. Technique of surgical treatment of acute appendicitis. Postoperative complications of acute appendicitis. Bleeding. Peritonitis. Abdominal abscesses. Intestinal fistulas. Chronic appendicitis.

External intestinal fistulas. Epidemiology. Causes. Classification. Diagnostic methods: clinical, radiological, instrumental.

Mesadenitis: non-specific, tuberculous. Diagnostics and treatment.

Surgical diseases of the liver and bile ducts.

Benign and malignant liver tumors. Surgical treatment of liver tumors. Non-parasitic liver cysts.

Parasitic liver diseases. Echinococcosis of the liver (hydatid). Clinic. Complications. Diagnostics. Choice of treatment method. Alveococcosis of the liver. Clinic. Diagnostics. Complications.

Liver abscesses.

Liver cirrhosis and portal hypertension. Classification of liver cirrhosis. Classification of portal hypertension.

Diagnostic methods for portal hypertension. Bleeding. Operations for portal hypertension.

Surgical diseases of the bile ducts.

Cholelithiasis. Indications for surgical treatment. Methods of surgical treatment. Endoscopic treatment. Complications of cholelithiasis. Mechanical jaundice. Endoscopic treatment. Surgical treatment. Indications for choledochotomy and its technique.

Acute cholecystitis. Complications of acute cholecystitis. Surgeon's tactics for acute cholecystitis. Chronic calculous cholecystitis. Indications for surgical treatment. Cancer of the gallbladder and bile ducts. Radical operations. Palliative operations. Postcholecystectomy syndrome.

Diseases of the pancreas. Acute pancreatitis. Surgical treatment. Indications for radical surgery. Postoperative management of patients. Complications of acute pancreatitis. Pancreatic cysts. True cysts. Classification. Clinic. Diagnostics. Surgical treatment. Pseudocysts of the pancreas.

Abdominal injuries.

Contusions and wounds of the anterior abdominal wall. Parenchymatous organ injury. Hollow organ injury. Retroperitoneal organ injury. Differential diagnostics, treatment.

Hernias. Classification. Epidemiology. Etiology. Treatment principles and techniques.

3.Coloproctology

Acute paraproctitis. Clinic, diagnostics, differential diagnostics. Complications. Methods of surgical treatment. Hemorrhoids. Etiology. Pathogenesis. Classification. Clinic, diagnostics, differential diagnostics. Methods of conservative treatment. Surgical treatment.

Epithelial coccygeal passage. Etiology. Pathogenesis. Clinic. Diagnostics. Differential diagnostics. Methods of surgical treatment.

Traumatic injuries of the rectum and perineum. Classification. Clinic. Diagnostics. Surgical treatment.

Rectal cancer. Clinic. Diagnostics. Complications of rectal cancer. Radical operations, remote results.

Diverticulosis of the colon. Etiology and pathogenesis. Classification. Clinic. Diagnostics.

Inflammatory bowel diseases. Nonspecific ulcerative colitis. Crohn's disease. Complications. Bleeding. Acute toxic dilation. Intestinal perforation. Peritonitis. Treatment methods.

4.Purulent surgery

Osteomyelitis

Main clinical forms. Course variants. Diagnostic methods: radiography, ultrasound examination, puncture of the bone marrow canal with measurement of intraosseous pressure, bacteriological, cytological examination.

Principles of therapy, osteoperforation. Complications.

Destructive pneumonia

Pulmonary forms: small focal multiple destruction, intralobar destruction, giant cortical abscess, bullous form of destruction. Clinic, course, diagnostics. Pulmonary-pleural forms: pyothorax, pneumothorax, pyopneumothorax. Clinic, diagnostics. Outcomes of lung destruction. Indications for pleural puncture and drainage of the pleural cavity. Pleural puncture technique. Active and passive aspiration technique. Therapy principles.

Peritonitis

Pathogenesis of the disease. Classification, stages of the course. Clinic, diagnostics Preoperative preparation: volume, nature, duration. Surgical technique, drainage methods, "lavage" of the abdominal cavity. Laparoscopy as a method of choice for the treatment of diplococcal peritonitis

5.Ambulatory surgery

Purulent diseases of soft tissues. Peculiarities of purulent-septic diseases in different age groups, principles of antibiotic therapy. Etiology, pathogenesis, calculation of antibiotics, correction of immune disorders

6.Pediatric surgery

Planned and plastic surgery in children.

Inguinal hernias

Etiology, classification

Diagnostics, terms and types of surgical treatment

Strangulated inguinal hernias. Differential diagnostics with inguinal lymphadenitis, spermatic cord cyst.

Surgeon's tactics. Herniolaparotomy.

Umbilical, paraumbilical hernias

Timing of surgical treatment. Management tactics depending on age. Types of operations.

Hernias of the white line of the abdomen

Clinic, diagnostics. Timing of surgical treatment.

Femoral hernias

Frequency of occurrence in childhood. Diagnostics, types of surgical treatment.

Median and lateral cysts of the neck.

Acute diseases caused by Meckel's diverticulum: intestinal obstruction, acute diverticulitis, bleeding. Clinical presentation, diagnostics, surgical technique.

Defects of the urachus inversion: complete and incomplete umbilical fistulas, bladder diverticulum, urachus cysts. Clinical presentation, diagnostics, surgical treatment methods.

Pediatric proctology.

Hirschsprung's disease. Dolichosigma.

Megacolon. Etiology, pathogenesis. Hirschsprung's disease. Classification. Clinical forms. Differential diagnostics. Irrigoscopy.

Dolichosigma.

Anorectal malformations. Congenital malformations.

Esophageal atresia. Esophageal atresia forms. Clinical manifestations. Diagnostics: survey, contrast radiography.

Pyloric stenosis. Congenital intestinal obstruction

Omphalocele

Antenatal diagnostics. Management tactics. Treatment tactics: radical surgery, conservative, surgical.

Gastroschisis. Plasty of the anterior abdominal wall, anesthetic-free reduction of everted organs, radical plastic surgery of the anterior abdominal wall, siloplasty.

Clinical features of acute appendicitis in young children. Differential diagnostics of acute appendicitis.

Diagnostic features in atypical forms.

Malformations of the kidneys and urinary tract. Classification. Hydronephrosis. Etiology, pathogenesis. Clinical presentation, radiological, ultrasound diagnostic methods. Obstructive ureterohydronephrosis. Vesicoureteral reflux. Etiology, pathogenesis. Clinical presentation, diagnostics, modern types of treatment. Bladder exstrophy, epispadias. Hypospadias. Classification, clinical forms. Malformations and diseases of the external genitalia.

Cryptorchidism. Hydrocele of the testicular membranes. Varicocele. Phimosis. Paraphimosis. Diagnostics.

Timing and technique of surgical treatment. Acute testicular diseases. Etiology. Classification. Diagnostics. Treatment.

Практические занятия /лабораторные работы организуются, в том числе, в форме практической подготовки, которая предусматривает участие обучающихся в выполнении отдельных элементов работ, связанных с будущей профессиональной деятельностью.

На проведение практических занятий / лабораторных работ в форме практической подготовки отводится: очная форма обучения - 8 ч.

4. Учебно-методическое обеспечение самостоятельной работы обучающихся

Самостоятельная работа обучающихся включает в себя подготовку к контрольным вопросам и заданиям для текущего контроля и промежуточной аттестации по итогам освоения дисциплины приведенным в п. 5.

записи учебных материалов на дистанционном портале

5. Assessment tools for ongoing monitoring of learning progress and interim certification in the discipline (module)

5.1 Model assignments required for assessment of learning outcomes during the ongoing monitoring of learning progress with the criteria for their assessment:

5.1.1 Model assignments (assessment tool - Test) to assess the development of the competency УК-1:

1. *Goiter in individuals of one biogeochemical region is defined as:
 - a. epidemic
 - b. sporadic
 - c. acute struma
 - d. endemic
 - e. mass thyrotoxicosis
2. * "Early" symptom of thyroid cancer?
 - a. lump and enlargement of the gland
 - b. pain when swallowing
 - c. dysphagia
 - d. hoarseness
 - e. weight loss
3. *What is the leading clinical manifestation of thyrotoxic goiter?
 - a. decreased production of thyroid hormone
 - b. increased production of thyroid hormone
 - c. increased production of pituitary hormones
4. *The main route of lymph drainage from the mammary gland is:
 - a. cross
 - b. subclavian
 - c. axillary
 - d. parasternal
 - e. intercostal
5. *A chest wound is considered penetrating if there is:
 - a. Rib fracture
 - b. Intercostal vessel damage
 - c. Skin integrity breach
 - d. Visceral pleura damage
 - e. Parietal pleura damage

5.1.2 Model assignments (assessment tool - Test) to assess the development of the competency ΠΚ-3:

1. *What is the main method of diagnosing thyroid cancer?
 - a. physical
 - b. X-ray
 - c. morphological
 - d. radioisotope
 - e. ultrasound

2. *Specify the method of most reliable confirmation of the diagnosis of "thyroid cancer".
 - a. anamnesis
 - b. palpation
 - c. radiometry
 - d. scanning
 - e. ultrasound
 - f. fine-needle aspiration biopsy
 - g. thermography

3. *The most informative method of instrumental diagnostics of spontaneous pneumothorax is:
 - a. Lung scintigraphy
 - b. Angiopulmonography
 - c. Chest X-ray
 - d. Pneumomediastinography
 - e. Mediastinoscopy

4. * The question of the presence or absence of damage to internal organs in closed abdominal trauma should be decided:
 - a. in the first 2 hours from admission
 - b. within 6 hours from admission
 - c. within the first 24 hours from admission

5. *What are the intraoperative signs of kidney injury:
 - a. intestinal paresis
 - b. edema of the pancreas
 - c. retroperitoneal hematoma
 - d. presence of fibrin in the abdominal cavity

5.1.3 Model assignments (assessment tool - Test) to assess the development of the competency ΠΚ-4:

1. *A characteristic sign of a lung rupture is:
 - a. hemoptysis
 - b. hemothorax

- c. pneumothorax
 - d. darkening of the lung on X-ray examination
 - e. hemopneumothorax
2. *Kidney injury is characterized by:
- a. secretory anuria
 - b. acute urinary retention
 - c. excretory anuria
 - d. total macrohematuria
 - e. clinical picture of peritonitis
3. *Signs of intraperitoneal bladder rupture:
- a. urinary incontinence
 - b. urinary dysfunction and symptoms of peritoneal irritation
 - c. urinary leakage into the pelvic tissue
 - d. renal failure
4. *The most common complication of penetrating gastric ulcer is:
- a. development of pyloric stenosis
 - b. dumping syndrome
 - c. formation of interorgan fistu
 - d. reflux esophagitis
 - e. perforation
 - f. pancreatitis
5. *The most common manifestation of dysphagia is gastric cancer localized:
- a. in the pyloric region
 - b. in the cardia
 - c. in the body of the stomach
 - d. along the greater curvature
 - e. in the fundus

5.1.4 Model assignments (assessment tool - Test) to assess the development of the competency IIK-5:

1. *What treatment is indicated for patients with nodular nontoxic goiter?
 - a. conservative
 - b. surgical
 - c. observation
2. *Which complication is not typical for thyroid surgery?
 - a. bleeding
 - b. air embolism
 - c. fat embolism
 - d. tracheal injury
 - e. recurrent nerve damage
3. *What is the most common complication of strumectomy?

- a. recurrent nerve injury
- b. recurrent thyrotoxicosis
- c. tetany
- d. hypothyroidism
- e. progressive exophthalmos

4. *A 22-year-old woman has a palpable dense 4x4 cm node in her mammary gland. Your recommendations:

- a. pregnancy, childbirth, breastfeeding
- b. hormonal therapy
- c. dynamic observation and examination after 1 year
- d. sectoral resection of the mammary gland with urgent histological examination
- e. radical mastectomy

5. *In case of chest trauma, emergency measures are primarily necessary:

- a. in case of a sternum fracture
- b. in case of a clavicle fracture
- c. in case of tension pneumothorax
- d. in case of a scapula fracture
- e. in case of a rib fracture

6. *A typical point for puncture and drainage of the pleural cavity in spontaneous pneumothorax is:

- a. 2nd intercostal space along the midclavicular line
- b. 7th intercostal space along the scapular line
- c. 5th intercostal space along the anterior axillary line
- d. 6th intercostal space along the posterior axillary line
- e. 3rd intercostal space along the parasternal line

7. *What is the tactic for a ruptured spleen and ongoing bleeding:

- a. splenectomy
- b. suturing the bleeding vessels in the spleen wound
- c. suturing the spleen wound
- d. suturing the spleen wound with omentum tamponade
- f. ligation of the splenic artery and vein

8. *Your tactics in case of established diagnosis of acute obstructive colonic obstruction.

- a. emergency surgery
- b. conservative therapy
- c. surgery if conservative therapy is ineffective

9. *What is the surgeon's tactics if a small bowel torsion is detected during surgery?

- a. bowel resection
- b. elimination of the torsion, reverse the bowel,
- c. bypass anastomosis
- d. reverse the bowel
- e. determine its viability and then determine further tactics

10. *A patient with acute intestinal obstruction has positive symptoms of peritoneal irritation and fever. What is your tactic?

- a. conservative therapy

- b. emergency surgery
- c. surgery if conservative therapy is ineffective

11. *What type of bleeding from the upper gastrointestinal tract can be stopped with a Blackmore tube:

- a. Bleeding from gastric mucosal erosions
- b. Bleeding from a duodenal ulcer
- c. Bleeding from esophageal varices
- d. Bleeding in Mallory-Weiss syndrome

12. *THE MOST PROBABLE DIAGNOSIS IN A CHILD of 8 MONTHS WITH SINGLE VOMITING, PAROXYSMAL ABDOMINAL PAIN, WITH ROUNDED FORMATION DETERMINED BY THE PALPATION IN THE RIGHT ILIAC REGION IS

- 1. intussusception of the intestine
- 2. appendicular infiltration
- 3. intestinal infection
- 4. swelling of the abdominal cavity

13. *WHAT COMPLICATION CAN BE EXPECTED FROM THE MEKKEL DIVERCYCLE?

- 1. intestinal bleeding
- 2. secondary inflammation of the appendix
- 3. feces disorders
- 4. repeated vomiting

14. *DEGENERATIVE PROCESSES IN UNDESCENDED TESTICLES ARE REPRODUCIBLY TRACED FROM

- 1. 2 years
- 2. Newborn period
- 3. 6 years old
- 4. 12 years old

15. *At the present time, the optimal method of treatment of acute appendicitis is APPENDECTOMY

- 1. laparoscopic
- 2. invaginative
- 3. using the "Da Vinci"
- 4. endoluminal intraluminal

16. *TRADITIONAL APPENDECTOMY EXECUTE SECTION

- 1. in right iliac region
- 2. parallel to the left side of the rectus abdominis muscle
- 3. in the left iliac region
- 4. above the pubis

17. *IN A CASE OF ACUTE CYSTITIS ANTIBACTERIAL PREPARATION IS FREQUENTLY INTRODUCED

- 1. orally
- 2. intravenously
- 3. intramuscular
- 4. intravesical

18. *THE MOST FREQUENT COMPLICATION AFTER THE OPERATION FOR THE NECK FISTULA IS

1. fistula recurrence
2. bleeding
3. seam divergence
4. hypersalivation

19. *THE INDICATION TO THE OPERATION ON THE INGUINAL-SCROTUM HERNIA IS

1. diagnosis
2. age after 5 years
3. diameter of protrusion over 3 cm
4. age after two years

20. *THE PATIENT WITH THE INJURY OF ABDOMEN. ON THE REVIEW X-RAY DIAGNOSTIC THERE IS FREE GAS IN THE ABDOMINAL CAVITY, ACTION IS REQUIRED

1. laparotomy
2. laparocentesis
3. observation
4. ultrasound examination

1 b 11 c

2 c 12 a

3 d 13 a

4 d 14 a

5 c 15 a

6 a 16 a

7 a 17 a

8 c 18 a

9 e 19 a

10 b 20 a

Assessment criteria (assessment tool — Test)

Grade	Assessment criteria
outstanding	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "outstanding", the knowledge and skills for the relevant competencies have been demonstrated at a level higher than the one set out in the programme
excellent	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "excellent",

Grade	Assessment criteria
very good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "very good",
good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "good",
satisfactory	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "satisfactory", with at least one competency developed at the "satisfactory" level
unsatisfactory	At least one competency has been developed at the "unsatisfactory" level.
poor	At least one competency has been developed at the "poor" level.

5.2. Description of scales for assessing learning outcomes in the discipline during interim certification

Шкала оценивания сформированности компетенций

Уровень сформированности компетенций (индикатора достижения компетенций)	плохо	неудовлетворительно	удовлетворительно	хорошо	очень хорошо	отлично	превосходно
	не зачтено		зачтено				
<u>Знания</u>	Отсутствие знаний теоретического материала. Невозможность оценить полноту знаний вследствие отказа обучающегося от ответа	Уровень знаний ниже минимальных требований. Имели место грубые ошибки	Минимально допустимый уровень знаний. Допущено много негрубых ошибок	Уровень знаний в объеме, соответствующем программе подготовки. Допущено несколько негрубых ошибок	Уровень знаний в объеме, соответствующем программе подготовки. Допущено несколько несущественных ошибок	Уровень знаний в объеме, соответствующем программе подготовки. Ошибок нет.	Уровень знаний в объеме, превышающем программу подготовки.
<u>Умения</u>	Отсутствие минимальных умений. Невозможность оценить наличие умений вследствие отказа обучающегося от ответа	При решении стандартных задач не продемонстрированы основные умения. Имели место грубые ошибки	Продемонстрированы основные умения. Решены типовые задачи с негрубыми ошибками. Выполнены все задания, но не в полном объеме	Продемонстрированы все основные умения. Решены все основные задачи с негрубыми ошибками. Выполнены все задания в полном объеме, но некоторые	Продемонстрированы все основные умения. Решены все основные задачи. Выполнены все задания в полном объеме, но некоторые с недочетами	Продемонстрированы все основные умения. Решены все основные задачи с отдельными несущественными недочетами и,	Продемонстрированы все основные умения. Решены все основные задачи. Выполнены все задания, в полном объеме без недочетов

				с недочетами	.	выполнены все задания в полном объеме	
<u>Навыки</u>	Отсутствие базовых навыков. Невозможность оценить наличие навыков вследствие отказа обучающегося от ответа	При решении стандартных задач не продемонстрированы базовые навыки. Имели место грубые ошибки	Имеется минимальный набор навыков для решения стандартных задач с некоторыми недочетами	Продемонстрированы базовые навыки при решении стандартных задач с некоторыми недочетами	Продемонстрированы базовые навыки при решении стандартных задач без ошибок и недочетов	Продемонстрированы навыки при решении нестандартных задач без ошибок и недочетов	Продемонстрирован творческий подход к решению нестандартных задач

Scale of assessment for interim certification

Grade		Assessment criteria
pass	outstanding	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "outstanding", the knowledge and skills for the relevant competencies have been demonstrated at a level higher than the one set out in the programme.
	excellent	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "excellent",
	very good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "very good",
	good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "good",
	satisfactory	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "satisfactory", with at least one competency developed at the "satisfactory" level.
fail	unsatisfactory	At least one competency has been developed at the "unsatisfactory" level.
	poor	At least one competency has been developed at the "poor" level.

5.3 Model control assignments or other materials required to assess learning outcomes during the interim certification with the criteria for their assessment:

5.3.1 Model assignments (assessment tool - Control questions) to assess the development of the competency УК-1

1. **Acute appendicitis. Complications of acute appendicitis. Clinic of various complications: their diagnostics. Acute appendicitis in children, pregnant women and the elderly. Treatment, indications and contraindications for appendectomy, choice of anesthesia method and surgical access.
2. ** Diseases of the colon: Polyposis. Classification. Clinical picture, diagnostics, differential diagnostics. Main symptoms. Indications and contraindications for surgical treatment.
3. ***Congenital intestinal obstruction. Classification. High and low intestinal obstruction. Malformations of the duodenum. Meconial intestinal obstruction. Anorectal abnormalities.

4. ***Congenital intestinal obstruction. Classification. High and low intestinal obstruction. Malformations of the duodenum.
5. ***Tumors of the gallbladder and bile ducts. Jaundice. Cancer of the large duodenal papilla.

5.3.2 Model assignments (assessment tool - Control questions) to assess the development of the competency ПК-3

1. ***Crohn's disease. Clinic. Diagnostics. Treatment.
2. **Gallstone disease and its complications: errors, dangers, complications in biliary tract surgery. Differential diagnostics of jaundice.
3. ***Postcholecystectomy syndrome. Clinic. Diagnostics. Treatment.
4. **Acute pancreatitis. Clinic. Diagnostics. Treatment.
5. **Chronic pancreatitis. Clinic. Diagnostics. Treatment.

5.3.3 Model assignments (assessment tool - Control questions) to assess the development of the competency ПК-4

1. **Fistulas and cysts of the pancreas. Clinic. Diagnostics. Treatment.
2. **Etiology and pathogenesis of gastric and intestinal ulcers. Pathological changes. Stage of ulcer development. Clinic and diagnostics.
3. ***Peculiarities of the clinical course depending on the ulcer localization, indications for surgical treatment of gastric ulcer and duodenal ulcer.
4. ***Complications of peptic ulcer, methods of gastric resection, their modifications, advantages, disadvantages.
5. ***Diseases of the operated stomach. Classification of diseases of the operated stomach. Clinical manifestations.
6. **Peptic ulcer of the stomach and duodenum complicated by perforation. Classification. Clinic, diagnostics. Symptoms. Surgical treatment methods. Taylor treatment.

1.

5.3.4 Model assignments (assessment tool - Control questions) to assess the development of the competency ПК-5

1. **Cholelithiasis. Chronic calculous cholecystitis – clinical picture and diagnosis, complications, surgical treatment.
2. ***Colon cancer. Villous tumor. Classification. Clinical presentation, diagnostics, differential diagnostics. Main symptoms. Indications and contraindications for surgical treatment.
3. **Diverticula of the colon. Classification. Clinical picture, diagnostics, differential diagnostics. Main symptoms. Indications and contraindications for surgical treatment
4. ***Nonspecific ulcerative colitis. ischemic colitis. Clinic. Diagnostics. Treatment
5. **Peptic ulcer of the stomach and duodenum complicated by bleeding. Forrest classification. Clinic, diagnostics. Symptoms. Endoscopic hemostasis methods. Surgical treatment methods.

Assessment criteria (assessment tool — Control questions)

Grade	Assessment criteria
outstanding	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "outstanding", the knowledge and skills for the relevant

Grade	Assessment criteria
	competencies have been demonstrated at a level higher than the one set out in the programme
excellent	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "excellent",
very good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "very good",
good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "good",
satisfactory	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "satisfactory", with at least one competency developed at the "satisfactory" level
unsatisfactory	At least one competency has been developed at the "unsatisfactory" level.
poor	At least one competency has been developed at the "poor" level.

5.3.5 Model assignments (assessment tool - Tasks) to assess the development of the competency YK-1

- **A 60-year-old patient was hospitalized in the surgical department 6 days after the appearance of pain in the right iliac region. The patient's condition is satisfactory. The temperature is 37.2°. There was no chill. Palpation of the abdomen – soreness in the right iliac region, where a 7 × 8 cm seal with indistinct borders is determined, painful. The Shchetkin-Blumberg symptom is weakly positive. The symptoms of Rovsing, Sitkovsky are positive. According to the patient, during the last 6 months, he notes a slight increase in constipation. Leukocytosis – $10.2 \times 10^9/l$.

- 1) *Your presumed diagnosis?*
- 2) *Which disease should be excluded?*
- 3) *Is an emergency operation indicated?*
- 4) *Your treatment tactics and examinations?*

Answer: tumor of the ileocecal region

5.3.6 Model assignments (assessment tool - Tasks) to assess the development of the competency ПК-3

1.

**A 54-year-old patient with a right-sided inguinal hernia had a sharp pain in the right inguinal region during the rearrangement of furniture,

continuing after the cessation of the effort, which prompted the patient to seek help in a medical institution.

On examination: the presence of an oval tumor-like formation in the right inguinal region with dimensions of 6x4x3 cm of a tight-elastic consistency,

painful on palpation and not set into the abdominal cavity, was found. Cough push is not carried out.

- 1) What is your diagnosis?
- 2) With which diseases should differential diagnosis be performed?
- 3) Surgeon's tactics

Answer: strangulated inguinal hernia

5.3.7 Model assignments (assessment tool - Tasks) to assess the development of the competency ПК-4

1. ***Patient E., 68 years old, was hospitalized in the surgical department 3 days after the strangulation of the umbilical hernia. Upon admission, the condition is serious. Body temperature 37.8 oc. The abdomen is not swollen, soft on palpation. In the navel area there is protrusion with a diameter of 6 cm, the skin above it is hyperemic, edematous. On palpation , the protrusion is dense, sharply painful.*

1. *Strangulation of which organ can be assumed from the clinical picture?*
2. *What is the sequence of stages of surgery for this complication?*

Answer: *strangulation of a loop of intestine in the umbilical ring*

5.3.8 Model assignments (assessment tool - Tasks) to assess the development of the competency ПК-5

- ***A child of 6 months suddenly had attacks of sharp anxiety, refusal to eat. The chair was normal the day before. During rectal examination, 8 hours after the onset of the disease, raspberry jelly-type secretions appeared.*

1. *Highlight the main complaint of the disease*
2. *Make a preliminary diagnosis*
3. *Identify an instrumental study to confirm the diagnosis*
4. *Determine the tactics of the pediatrician and the tactics of treatment.*

5. *Answer: intestinal intussusception*

Assessment criteria (assessment tool — Tasks)

Grade	Assessment criteria
outstanding	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "outstanding", the knowledge and skills for the relevant competencies have been demonstrated at a level higher than the one set out in the programme
excellent	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "excellent",
very good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "very good",
good	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "good",
satisfactory	All the competencies (parts of competencies) to be developed within the discipline have been developed at a level no lower than "satisfactory", with at least one competency developed at the "satisfactory" level
unsatisfactory	At least one competency has been developed at the "unsatisfactory" level.
poor	At least one competency has been developed at the "poor" level.

5.3.9 Model assignments (assessment tool - Tasks) to assess the development of the competency YK-1

- ***A 13-year-old girl had abdominal pain, fever, vomiting for 3 days. On examination, the child is pale, sluggish, complains of abdominal pain. The temperature is 37.9. There were no deviations from the organs of the thoracic cavity. Pulse 92 beats in 1 min. The abdomen is not swollen, with palpation in the right iliac region, a painful immobile formation of 6 x 6 cm is determined. The symptom of Shchetkin Blumberg is positive. Leukocytosis 16200.*

1. Highlight the main complaint of the disease
2. Specify the diseases for a differential diagnosis based on the complaint
3. Make a differential diagnosis based on clinical symptoms
4. Make a plan for laboratory and instrumental examination
5. Make a clinical diagnosis
6. Determine the tactics of the pediatrician and the tactics of treatment
7. Specify the reason for the late diagnosis and the occurrence of complications
8. Answer: appendicular infiltrate

5.3.10 Model assignments (assessment tool - Tasks) to assess the development of the competency ПК-3

- ******A 22-year-old patient, operated on 16 hours ago for acute appendicitis, developed weakness, dizziness. The temperature is normal. The skin is pale, the pulse is 110 per minute. The abdomen is soft, painful in the area of the postoperative wound. In the sloping places of the abdomen , percussion determines shortening of the percussion sound, the boundary of which shifts when the patient turns to the side. Leukocytosis $11.2 \times 10^9/L$.

1. What complication did you suspect in the patient?

2. How can you confirm your assumption?

3. What should be done?

4. Answer: postoperative bleeding

5.3.11 Model assignments (assessment tool - Tasks) to assess the development of the competency ПК-4

- **A 6-year-old child was admitted to the clinic with a diagnosis of cirrhosis of the liver. The condition suddenly worsened, vomiting of "coffee grounds" appeared. The skin is pale, cold. Pulse is frequent, weak filling. BELL IS 90/50. Hemoglobin 86 g/l.*

Questions:

1. Highlight the main complaint of the disease

2. Specify the diseases for a differential diagnosis based on the complaint

3. Make a differential diagnosis based on clinical symptoms

4. Make a plan for laboratory and instrumental examination

5. Determine the tactics of the pediatrician and emergency care.

6. Answer: bleeding from esophageal varices

5.3.12 Model assignments (assessment tool - Tasks) to assess the development of the competency ПК-5

*1. ***

A 5-year-old girl became acutely ill, lethargy appeared, body temperature rose to 38.7° , abdominal pain, nausea, and vomiting occurred twice. On examination, the tongue is dry, pulse is 110 beats per minute, heart sounds are muffled. In the lungs, breathing is vesicular. The abdomen does not participate in the act of breathing; upon palpation it is painful in all parts. There is tension in the anterior abdominal wall and a positive

Shchetkin-Blumberg sign in both iliac regions. There is mucopurulent discharge from the genital tract. Blood test shows leukocytosis 18000.

- 1. Guess the most likely diagnosis*
- 2. What emergency measures are needed in this case?*
- 3. What is necessary for differential diagnosis for this pathology?*
- 4. Determine the tactics for further management of the patient.*

1. Answer: pelvioperitonitis

Assessment criteria (assessment tool — Tasks)

Grade	Assessment criteria
pass	The level of knowledge corresponds to the training program. Several minor errors were made.
fail	The level of knowledge is below the minimum requirements. There were serious errors.

5.3.13 Model assignments (assessment tool - Assignments) to assess the development of the competency YK-1

- **Diseases of the diaphragm. Diaphragmatic hernias. Relaxation of the diaphragm.**
- **Diseases of the mammary gland. Fibroadenomas and fibroadenomatosis of the mammary glands. 3. Acute mastitis. Classification, clinical presentation, treatment.**
- **Diseases of the esophagus: achalasia, diverticula, peptic esophagitis. Clinical presentation, diagnostics, treatment.**
- **Burns of the esophagus. Clinical presentation of cicatricial stenosis of the esophagus. Diagnostics**

5.3.14 Model assignments (assessment tool - Assignments) to assess the development of the competency ПК-3

- **Thrombophlebitis. Clinic, diagnostics, treatment.**
- **Postthrombophlebitic syndrome. Clinic, diagnostics, treatment.**
- **Varicose veins. Pulmonary embolism.**
- **Peripheral arterial diseases: diabetic micro- and macroangiopathy**
- **Diseases of the aorta and its branches. aneurysms.**

5.3.15 Model assignments (assessment tool - Assignments) to assess the development of the competency ПК-4

1. ***Intestinal fistulas: clinical features, diagnostics, treatment.
2. **Diseases of the rectum: hemorrhoids. Stages, clinical features, diagnostics, treatment. 3. 13. Diseases of the rectum: fissure. Localization, clinical features, treatment (conservative, surgical).
4. **Rectal cancer. Clinic, diagnostics, treatment.
5. **Epithelial coccygeal passage. Clinic, diagnostics, treatment.

5.3.16 Model assignments (assessment tool - Assignments) to assess the development of the competency ПК-5

1. **Treatment with bougienage. Methods of bougienage. Indications for them. First aid. Clinic and treatment in the acute period.
2. **Esophageal cancer. Clinic, diagnostics, treatment.
3. ***Diseases of the adrenal glands. Clinic, diagnostics, treatment.
4. *** Diseases of the retroperitoneal space. Clinic, diagnostics, treatment.
5. ** Diseases of the parathyroid glands. Clinic, diagnostics, treatment.

Assessment criteria (assessment tool — Assignments)

Grade	Assessment criteria
pass	The level of knowledge corresponds to the training program. Several minor errors were made.
fail	The level of knowledge is below the minimum requirements. There were serious errors.

6. Учебно-методическое и информационное обеспечение дисциплины (модуля)

Основная литература:

1. Госпитальная хирургия. Семинарские занятия / под ред. Шаповальянца С.Г., Плахова Р.В., Шабрина А.В. - 2-е изд. - Москва : Юрайт, 2022. - 155 с. - (Высшее образование). - URL: <https://urait.ru/bcode/496318> (дата обращения: 05.01.2022). - ISBN 978-5-534-13085-0 : 449.00. - Текст : электронный // ЭБС "Юрайт"., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=784439&idb=0>.

2. Василевский В. П. Сложные вопросы клинической хирургии = Challenging issues in clinical surgery : пособие для студентов учреждений высшего образования, обучающихся по специальностям 1-79 01 01 "лечебное дело" / Василевский В. П., Могилевец Э. В., Белюк К. С. - Гродно : ГрГМУ, 2022. - 448 с. - Рекомендовано учебно-методическим объединением по высшему медицинскому, фармацевтическому образованию в качестве пособия для студентов учреждений высшего образования, обучающихся по специальности 1-79 01 01 «Лечебное дело». - Книга из коллекции ГрГМУ - Медицина. - ISBN 978-985-595-738-7., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=864039&idb=0>.

Дополнительная литература:

1. Госпитальная хирургия. Семинарские занятия : Учебное пособие для вузов / под ред. Шаповальянца С.Г., Плахова Р.В., Шабрина А.В. - 2-е изд. - Москва : Юрайт, 2021. - 155 с. - (Высшее образование). - ISBN 978-5-534-13085-0. - Текст : электронный // ЭБС "Юрайт"., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=759210&idb=0>.
2. Гостищев В.К. General surgery : практическое руководство / Гостищев В.К. - Москва : ГЭОТАР-Медиа, 2020. - 220 с. - ISBN ISBN 978-5-9704-5439-8., <https://e-lib.unn.ru/MegaPro/UserEntry?Action=FindDocs&ids=735463&idb=0>.

Программное обеспечение и Интернет-ресурсы (в соответствии с содержанием дисциплины):

ЭБС «Юрайт». Режим доступа: <http://biblio-online.ru>.

ЭБС «Консультант студента». Режим доступа: <http://www.studentlibrary.ru>.

ЭБС «Лань». Режим доступа: <http://e.lanbook.com/>.

ЭБС «Znanium.com». Режим доступа: www.znanium.com.

7. Материально-техническое обеспечение дисциплины (модуля)

Учебные аудитории для проведения учебных занятий, предусмотренных образовательной программой, оснащены мультимедийным оборудованием (проектор, экран), техническими средствами обучения, компьютерами.

Помещения для самостоятельной работы обучающихся оснащены компьютерной техникой с возможностью подключения к сети "Интернет" и обеспечены доступом в электронную информационно-образовательную среду.

Программа составлена в соответствии с требованиями ФГОС ВО по направлению подготовки/специальности 31.05.01 - General Medicine.

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