

## Catalog of elective subjects

1. **The Department of "Surgery"**
2. **The level of training:** Residency
3. **Educational program:** 7R01136 General surgery.
4. **Course:** 1
5. **Name of the elective discipline:** " Endovideoscopy intervention in abdominal surgery".
6. **Number of credits:** 4 credits / 120 hours.
7. **Objective:** to deepen and acquire new knowledge, improve knowledge on the etiology, pathogenesis, diagnosis and treatment of patients with diseases of the abdominal cavity using endovideosurgical technologies; to improve skills in performing endovideosurgical diagnostics and endovideosurgical operations in abdominal surgery.
8. **Tasks:**
  - Improvement of knowledge about the etiology, pathogenesis of diseases, clinic, endovideosurgical diagnostics, differential diagnosis and surgical treatment of diseases of internal organs using endovideosurgical technologies.
  - Improving the skills of practical use of endovideosurgical equipment and tools.
  - Training in the ability to assess risk factors, indications and contraindications for endovideosurgical diagnostic studies, manipulations and operations.
  - Improving the skills of performing various endovideosurgical diagnostic studies, manipulations and operations.
9. **Content of disciplines:** Formation of knowledge on endovideolaparoscopic interventions in abdominal surgery. Principles of work with endosurgical equipment. Modern highly specialized laparoscopic surgery: peptic ulcer of the stomach and duodenum, hepatobiliary zone, diseases of the spleen. Laparoscopic appendectomy, removal of Meckel's diverticulum, laparoscopic resection of the small intestine. Laparoscopic hernioplasty. Scientific research and knowledge of evidence-based medicine.
10. **Rationale for choosing a discipline:** In the conditions of dynamic development and development of new technologies in the diagnosis and treatment of patients with diseases of the abdominal cavity using endovideosurgical equipment, it is necessary to qualitatively improve the knowledge and professional skills of a surgeon in this field. Taking into account the above, the process of studying the discipline is aimed at forming elements of specific competencies that contribute to a significant improvement in both the professional activity of a specialist and the quality of medical care to the population.
11. **Learning outcomes (competencies).**
  - **LO1** Able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of surgical care.
  - **LO2** Able to interact effectively with the patient, his environment, healthcare professionals in order to achieve the best results for the patient.
  - **LO3** is able to assess risks and use the most effective methods to ensure a high level of safety and quality of surgical care.
  - **LO4** Able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in his specialty, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of promoting the health of the nation.
  - **LO5** is able to formulate adequate research questions, critically evaluate professional literature, effectively use international bases in their daily activities, participate in the work of a research team.
  - **LO6** Able to learn independently and train other members of a professional team, actively participate in discussions, conferences and other forms of continuous professional development.
12. **Prerequisites:** internship in the speciality "Surgery".

**13. Post-requirements:** doctoral studies.

**14. Literature:**

**Main:**

1. Гостищев В.К. Клиническая оперативная гнойная хирургия: Руководство для врачей.- М: ГЭОТАР-Медиа. 2016.-448с.
2. Затевахина И.И., Кириенко А.И. Кубышкина В.А. Абдоминальная хирургия. Национальное руководство. М. : ГЭОТАР - Медиа, 2017. - 912с.
3. Руководство по неотложной хирургии органов брюшной полости. Под редакцией В.С. Савельева. Триада –Х. 2014-640 стр.
4. Хирургические болезни. Учебник. В 2 томах. Под редакцией В.С. Савельева, А.И. Кириенко. М: ГЭОТАР-медиа. 2006.Т-1. 608 стр. Т2-400 стр.
5. Хирургические болезни: учебник / под.ред.М.И: Кузин. -3 е изд.,перераб. И доп. – М.,2005.
6. Стандарты диагностики и лечения острых хирургических заболеваний и травм органов брюшной полости. М.Н. Изимбергенов. Актобе 2008

**Additional:**

1. Сексенбаев Д.С. Хирургические болезни: учеб.пособие – 2-е изд.- Шымкент,2009г.
2. Протоколы диагностики и лечения заболеваний: для стационаров хирургического профиля. – Астана, 2013.

**1. The Department of "Surgery"**

**2. The level of training:** Residency

**3. Educational program:"** 7R01136 General surgery.

**4. Course:** 1

**5. Name of the elective discipline:** " Actual issues of Coloproctology".

**6. Number of credits:** 4 credits / 120 hours.

**7. Objective:** to deepen the knowledge and clinical skills to provide specialized assistance in coloproctology.

**8. Tasks:**

- in-depth study of knowledge on coloproctology;
- improvement of knowledge on modern principles of diagnosis and differential diagnosis in patients with pathology of the large intestine;
- independent implementation of qualified medical care in various conditions and diseases in coloproctology requiring surgical intervention.

**9.Contentofdisciplines:** Formation of knowledge on modern highly specialized methods of diagnosis, differential diagnosis and treatment in the field of coloproctology. Clinical protocols of the Republic of Kazakhstan. Scientific research and knowledge of evidence-based medicine in medical practices and research.

**10.Rationale for choosing a discipline:** The problem of surgical treatment of diseases of the large intestine continues to be relevant due to the high level of morbidity, the complexity of early diagnosis of pathology, the sick frequency of malignancy and the limited possibilities of carrying out radical surgical treatment. Improvement of the methods of surgical treatment is aimed at reducing the hospital stay of patients due to the healing time and early rehabilitation.

**11.Learning outcomes (competencies).**

- **LO1** Able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of surgical care.
- **LO2** Able to interact effectively with the patient, his environment, healthcare professionals in order to achieve the best results for the patient.
- **LO3** is able to assess risks and use the most effective methods to ensure a high level of safety and quality of surgical care.
- **LO4** Able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in his specialty, provide basic assistance in emergency

situations, work as part of interprofessional teams to implement the policy of promoting the health of the nation.

- **LO5** is able to formulate adequate research questions, critically evaluate professional literature, effectively use international bases in their daily activities, participate in the work of a research team.
- **LO6** Able to learn independently and train other members of a professional team, actively participate in discussions, conferences and other forms of continuous professional development.

**12. Prerequisites:** internship in the speciality "Surgery".

**13. Post-requirements:** doctoral studies.

**14. Literature:**

**Main:**

1. Ривкин В.Л. Болезни прямой кишки- М.: ГЭОТАР - Медиа, 2018.-128с.
2. Шестаков А.М., Сапин М.Р. Прямая кишка и заднепроходной канал. М.: ГЭОТАР - Медиа, 2013.-128с.
3. Адлер Д.Г. Колоноскопия: иллюстрированное руководство. -М.: ГЭОТАР - Медиа, 2016.-224с.
4. Загрядский Е.А. Малоинвазивная хирургия геморроидальной болезни.- М.: ГЭОТАР - Медиа, 2017.-224с.
5. Хирургиялық аурулар : оқулық / қазақ тіл. ауд. С. О. Сабербеков ; ред. А. Ф. Черноусов. - М. : ГЭОТАР - Медиа, 2018. - 576 б. +эл. опт. диск (CD-ROM).
6. Нұрмақов, А. Ж. Хирургиялық аурулар: оқулық / А. Ж. Нұрмақов, А. Н. Баймаханов. - М. : "Литтерра", 2017. - 256 бет. с.
7. Федоров В.Д., Дульцев Ю.В. Проктология.- М., 2018.- 384с
8. Ливзан М.А. Современные принципы лечения запоров. Росс. журнал гастроэнтерологии, гепатологии, колопроктологии. – 2019, № 2, том XIX. - С. 70-74.

**Additional**

1. Колоректальная хирургия под ред.Робина К.С. Филиппа. Перевод с англ.348с
2. Қалдыбаев, М. А. Жалпыхирургияның тест сұрақтары: оқу құралы / М. А. Қалдыбаев ; ҚР денсаулықсақтау министрлігі. - Қарағанды : ЖК "Ақнұр", 2013. - 370 бет. с.
3. Сексенбаев, Д. С. Острые хирургические заболевания органов брюшной полости : учебное пособие / Д. С. Сексенбаев. - Шымкент : ЮКГФА, 2017. - 246 с.
4. Акатаев Н.А., Сабыр К.К. Избранные вопросы хирургии. Ақтобе, 2014, 430

**1. The Department of "Surgery"**

**2. The level of training:** Residency

**3. Educational program:** 7R01136 General surgery.

**4. Course:** 1

**5. Name of the elective discipline:** " Interventional radiology in surgery "

**6. Number of credits:** 4 credits / 120 hours.

**7. Objective:** To form the student's knowledge and practical skills on organ-complex use in clinical medicine of modern methods of radiation imaging and methods of radiation therapy of various diseases

**8. Tasks:**

- In-depth study of theoretical and methodological foundations interventional radiological interventions;
- Improvement of knowledge and skills in radiation diagnostics diseases and injuries of organs and systems;
- Conduct an in-depth study of modern interventional methods for treating various diseases;

**9. Content of disciplines:** Formation of knowledge on interventional radiology in surgery. X-ray endovascular interventions, main types. Scientific research and knowledge of evidencebased medicine in medical practices and research.

**10. 10. Rationale for choosing a discipline:** A branch of medicine formed on the basis of the interdisciplinary integration of radiology and surgery, which allows performing surgical interventions simultaneously with diagnostic and therapeutic purposes under the control of radiological, ultrasound, magnetic resonance techniques and endoscopic optical systems. Interventional interventions that combine diagnosis and treatment performed by a single specialist are more effective, less traumatic for the patient, have fewer complications, are cost-effective and justified compared to large surgical interventions.

**11. Learning outcomes (competencies).**

- **LO1** Able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of surgical care.
- **LO2** Able to interact effectively with the patient, his environment, healthcare professionals in order to achieve the best results for the patient.
- **LO3** is able to assess risks and use the most effective methods to ensure a high level of safety and quality of surgical care.
- **LO4** Able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in his specialty, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of promoting the health of the nation.
- **LO5** is able to formulate adequate research questions, critically evaluate professional literature, effectively use international bases in their daily activities, participate in the work of a research team.
- **LO6** Able to learn independently and train other members of a professional team, actively participate in discussions, conferences and other forms of continuous professional development.

**12. Prerequisites:** internship in the speciality "Surgery".

**13. Post-requirements:** doctoral studies.

**14. Literature:**

**Main:**

1. Хирургиялық аурулар : оқулық / қазақ тіл. ауд. С. О. Сабербеков ; ред. А. Ф. Черноусов. - М. : ГЭОТАР - Медиа, 2018. - 576 б. +эл. опт. диск (CD-ROM).
2. Нұрмақов, А. Ж. Хирургиялық аурулар: оқулық / А. Ж. Нұрмақов, А. Н. Баймаханов. - М. : "Литтерра", 2017. - 256 бет. с.
3. Сексенбаев, Д. С. Острые хирургические заболевания органов брюшной полости : учебное пособие / Д. С. Сексенбаев. - Шымкент : ЮКГФА, 2017. - 246 с.
4. Рахметов, Н. Р. Госпиталдық хирургия пәніне арналған практикум : оқу құралы / Н. Р. Рахметов. - Алматы : Эверо, 2013. - 136 бет. с.
5. Қалдыбаев, М. А. Ситуациялық тапсырмалар : жалпы хирургия пәніне арналған оқу құралы / М. А. Қалдыбаев ; ҚР денсаулық сақтау министрлігі. - Қарағанды : ЖК "Ақнұр", 2013. - 124 бет. с.
6. Нұрахманов, Б. Ж. Жүрек-қан тамыр хирургиясы : оқулық / Б. Ж. Нұрахманов. - Алматы : Эверо, 2042. - 334 бет. с.
7. Нурахманов, Б. Д. Клиническая хирургия : учебник / Б. Д. Нурахманов. - ; Рек. к печати Центр. Методич. Советом КазНМУ им. С. Д. Асфендиярова. - Алматы : Эверо, 2014. - 525 с.
8. Мәдікенов, Ө. М. Жалпы хирургия : оқу құралы = Общая хирургия : учеб. пособие / Ө. М. Мәдікенов, О. М. Мадыкенов. - Алматы : Эверо, 2014. - 456 бет. с.

**Additional:**

1. Қалдыбаев, М. А. Жалпы хирургияның тест сұрақтары: оқуқұралы / М. А. Қалдыбаев ; ҚР денсаулық сақтау министрлігі. - Қарағанды : ЖК "Ақнұр", 2013. - 370 бет. с.
2. Мәдікеноұлы, Ө. Хирургиялық аурулар: оқулық-дәрістер / Ө. Мәдікеноұлы ; ҚР денсаулық сақтау министрлігі; ҚазММА жоғары және ЖОО-нан кейінгі мамандықтар бойынша білім беру оқу-әдістемелік секциясы. - Алматы : Эверо, 2012. - 405 бет

3. Сексенбаев, Д. С. Хирургиялық аурулар :оқуқұралы / Д. С. Сексенбаев. - Шымкент : ОҚММА, 2019. - 336 бет с.
4. Нұрмақов, А. Ж. Хирургиялық аурулар (клиникалық дәрістер) :оқуқұралы / А. Ж. Нұрмақов. - Алматы :Асем-Систем, 2008. - 176 бет с.
5. Акатаев Н.А., Сабыр К.К. Избранные вопросы хирургии. Актобе, 2011, 430  
Изимбергенов Н.И. Лапароскопическая хирургия. Актобе, 2018, 86 с.

**1. The Department of "Surgery"**

**2. The level of training:** Residency

**3. Educational program:** 7R01136 General surgery.

**4. Course:** 1

**5. Name of the elective discipline:** " Current problems of oncology and radiation therapy "

**6. Number of credits:** 4 credits / 120 hours.

**7. Objective:** To form the student's knowledge and practical skills on the use of modern methods of radiation therapy for cancer in clinical medicine.

**8. Tasks:**

- In-depth study of theoretical and methodological foundations

- Oncology and radiation interventions;

Improving knowledge and skills in radiation therapy of cancer;

- Conduct an in-depth study of modern radiation treatment methods in Oncology;

**9. Content of disciplines:** Innovative high-tech diagnostic methods in oncology. Modern radiation, chemotherapeutic and surgical methods for the treatment of tumors: head and neck, organs of the chest and abdominal cavities, genitourinary system, musculoskeletal system, hematopoietic system, skin.

**10. Rationale for choosing a discipline:** Section in medicine, formed on the basis of the interdisciplinary integration of radiation diagnostics and surgery, which allows performing radiation interventions for the treatment of various oncological diseases. Radiation interventions performed by a single specialist are more effective, less traumatic for a cancer patient, and have fewer complications.

**11. Learning outcomes (competencies).**

- **LO1** Able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of surgical care.
- **LO2** Able to interact effectively with the patient, his environment, healthcare professionals in order to achieve the best results for the patient.
- **LO3** is able to assess risks and use the most effective methods to ensure a high level of safety and quality of surgical care.
- **LO4** Able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in his specialty, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of promoting the health of the nation.
- **LO5** is able to formulate adequate research questions, critically evaluate professional literature, effectively use international bases in their daily activities, participate in the work of a research team.
- **LO6** Able to learn independently and train other members of a professional team, actively participate in discussions, conferences and other forms of continuous professional development.

**12. Prerequisites:** internship in the speciality "Surgery".

**13. Post-requirements:** doctoral studies.

**14. Literature:**

**Main:**

1. Давыдов, М. И. Онкология : оқулық / қазақ тіл. ауд. Ә. К. Қойшыбаев. - М. : ГЭОТАР - Медиа, 2018

2. Абисатов, Х. А. Общие аспекты клинической онкологии. 1 ч. : учеб. пособие / Х. А. Абисатов, Н. Т. Джайнакбаев, С. Е. Есентаева. - Алматы : Эверо, 2016.
3. Абисатов, Х. А. Общие аспекты клинической онкологии. 2 ч. : учеб. пособие / Х. А. Абисатов, Н. Т. Джайнакбаев, С. Е. Есентаева. - Алматы : Эверо, 2016
4. Есенқұлов , Ә. Е. Практикалық онкология : оқулық / А. Есенқұлов . - Алматы : Эверо, 2011.
5. Ганцев, Ш. Х. Онкология : учебник / Ш. Х. Ганцев. - М. : Медицинское информационное агентство, 2016

**Additional:**

1. Онкология. Национальное руководство. Краткое издание : руководство / под ред. В. И. Чиссова. - М. : ГЭОТАР - Медиа, 2016.
2. Абисатов, Х. А. Лекции по онкогинекологии и онкоурологии. 1 т. Лекции по онкогинекологии : лекции / Х. А. Абисатов, А. А. Байназарова, А. М. Байдувалиев. - Алматы : Эверо, 2016.
3. Абисатов, Х. А. Лекции по онкогинекологии и онкоурологии. 2 т. Лекции
4. по онкоурологии: лекции / Х. А. Абисатов, А. А. Байназарова, А. М.
5. Байдувалиев. - Алматы : Эверо, 2016

**1. The Department of "Surgery"**

**2. The level of training:** Residency

**3. Educational program:** 7R01136 General surgery.

**4. Course:** 1

**5. Name of the elective discipline:** " Current issues of surgical endocrinology".

**6. Number of credits:** 4 credits / 120 hours.

**7. Objective:** integration of modern scientific knowledge and skills in the field of endocrine surgery to improve the efficiency of treatment of patients with this pathology.

**8. Tasks:**

- improve communication and practical skills in surgical endocrinology;
- expand the knowledge and skills of undergraduates in the interpretation of modern laboratory, invasive and non-invasive methods for diagnosing surgical patients with endocrine pathology;
- increased knowledge of surgical interventions on the thyroid gland, adrenal glands, pancreas and target organs in diabetes;

**9. Content of disciplines:** Invocation methods of diagnosis and differential diagnosis, and treatment: type 1 and 2 diabetes mellitus, complications of diabetes mellitus, diabetic foot syndrome, endocrine tumors of the pancreas, parathyroid diseases, obesity, metabolic syndrome, thyroid diseases, adrenal glands.

**10. Rationale for choosing a discipline:** In the treatment of diseases of the endocrine system, the leading importance belongs to surgical methods. The increase in the number of surgical interventions on the organs of the endocrine system is due to an increase in the incidence and improvement of early diagnosis in connection with the widespread introduction of highly informative diagnostic technologies. However, it is noted as an unjustified increase in surgical activity in relation to some diseases of the endocrine system, and the expansion of indications for conservative treatment. Therefore, issues relating to the determination of indications for surgical treatment and the choice of its adequate volume remain debatable, and with the introduction of the latest high-tech technologies (mini-invasive methods, endovideosurgical and laser technology), the increasing importance of socio-economic factors and the commercialization of medicine become particularly relevant.

**11. Learning outcomes (competencies).**

- **LO1** Able to formulate a clinical diagnosis, prescribe a treatment plan and evaluate its effectiveness based on evidence-based practice at all levels of surgical care.
- **LO2** Able to interact effectively with the patient, his environment, healthcare professionals in order to achieve the best results for the patient.

- **LO3** is able to assess risks and use the most effective methods to ensure a high level of safety and quality of surgical care.
- **LO4** Able to act within the legal and organizational framework of the healthcare system of the Republic of Kazakhstan in his specialty, provide basic assistance in emergency situations, work as part of interprofessional teams to implement the policy of promoting the health of the nation.
- **LO5** is able to formulate adequate research questions, critically evaluate professional literature, effectively use international bases in their daily activities, participate in the work of a research team.
- **LO6** Able to learn independently and train other members of a professional team, actively participate in discussions, conferences and other forms of continuous professional development.

**12. Prerequisites:** internship in the speciality "Surgery".

**13. Post-requirements:** doctoral studies.

**14. Literature:**

**Primary:**

1. Дедова И.И., Кузнецова Н.С., Мельниченко Г.А. // Эндокринная хирургия. Практические руководства. М.:Литтерра, 2014.-344с.
2. Шустов С.Б. и др. // Функциональная и топическая диагностика в эндокринологии: руководство для врачей. 3-е издание перераб. и доп. – М.:ГЭОТАР-Медиа, 2017.-272с.
3. Анциферов М.Б., Галстян. Г.Р., Токмакова А.Ю., Удовиченко О.В. //Синдром диабетической стопы. Атлас для врачей - эндокринологов. Мое-ква, 2003.
4. Брыскин Б.С, Тартаковский Е.А., Гвоздев Н.А., Якобишвили Я.И.Лечение осложненных форм синдрома диабетической стопы в условиях специализированного отделения. Клиническая медицина. 2014; том 78, № 5. стр. 43-45.
5. Бреговский В. Б., Зайцев А.А., Залевская А.Г., Карпов О.И., Карпова И.А, Цветкова Т.Л. Поражение нижних конечностей при сахарном диабете. Москва - Санкт-Петербург 2014, 263с.
6. Горюнов СВ., Ромашов Д.В., Бутившенко И.А. Гнойная хирургия. Москва 2014, 555 стр.

**Additional:**

1. Древаль А.В. Эндокринология: руководство для врачей /-М.:ГЭОТАР-Медиа, 2016-544с.
2. Гурьева И.В. Факторы риска развития синдрома диабетической стопы. РМЖ, 2013. том 11 № 6.
3. Дедов И.И., Удовиченко О.В., Галстян. Г.Р., //Диабетическая стопа (монография) Москва, 2015. 175стр.