

## Surgery

### Educational subject description sheet

#### Basic information

<b>Department</b> Faculty of Medicine  <b>Field of study</b> Medical Program  <b>Study level</b> long-cycle master's degree program  <b>Study form</b> full-time  <b>Education profile</b> general academic  <b>Disciplines</b> Medical science  <b>Subject related to scientific research</b> Yes		<b>Didactic cycle</b> 2016/17  <b>Realization year</b> 2018/19, 2019/20, 2020/21, 2021/22  <b>Lecture languages</b> English  <b>Block</b> obligatory for passing in the course of studies  <b>Mandatory</b> obligatory  <b>Examination</b> examination  <b>Standard groups</b> A. Morphological education, B. Scientific basics of medicine, C. Preclinical course, F. Clinical procedural sciences
<b>Subject coordinator</b>	Marcin Dembiński, Jakub Kenig, Aleksander Konturek	
<b>Lecturer</b>	Michał Pędziwiatr, Marcin Dembiński, Mateusz Rubinkiewicz, Marcin Barczyński, Bartosz Bogusz, Tomasz Cegielný, Rafał Chrzan, Tomasz Gil, Wojciech Górecki, Andrzej Gryglewski, Katarzyna Jaśko, Halina Jurkowska, Jakub Kenig, Jarosław Kuźdżał, Anna Lasek, Dawid Maduzia, Maciej Matyja, Katarzyna Milian-Ciesielska, Artur Pasternak, Barbara Piekarska, Michał Romaniszyn, Janusz Sulisławski, Jerzy Sułko, Jerzy Walocha, Piotr Wałęga, Aleksander Konturek, Jadwiga Dworak, Piotr Małczak, Piotr Major, Marcin Strzałka, Magdalena Pisarska, Marek Winiarski, Michał Natkaniec, Tomasz Wikar, Justyna Rymarowicz, Katarzyna Kołodziejska, Kinga Bugajska, Agata Czerwińska, Anna Drózd, Anna Rzepa, Wojciech Serednicki	
<b>Periods</b> Semester 5, Semester 6	<b>Examination</b> credit  <b>Activities and hours</b> seminar: 35, classes: 57, lecture: 34	<b>Number of ECTS points</b> 7.0

<b>Periods</b> Semester 7, Semester 8	<b>Examination</b> credit  <b>Activities and hours</b> lecture: 24, seminar: 8, classes: 44, simulations: 12	<b>Number of ECTS points</b> 5.0
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<b>Periods</b> Semester 9, Semester 10	<b>Examination</b> credit  <b>Activities and hours</b> lecture: 6, seminar: 33, classes: 42	<b>Number of ECTS points</b> 5.0
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<b>Periods</b> Semester 11, Semester 12	<b>Examination</b> examination  <b>Activities and hours</b> clinical classes: 120	<b>Number of ECTS points</b> 8.0
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## Goals

C1	E.U14. recognizes the states of immediate danger of life; E.U35. evaluates bedsores and apply the appropriate dressings; F.W1. knows and understands the causes, symptoms, principles of diagnosis and therapeutic treatment in relation to the most common diseases requiring surgical intervention, taking into account the individuality of childhood, in particular: a) acute and chronic diseases of the abdominal cavity, b) diseases of the chest, c) diseases of limbs and head d) fractures and injuries of organs; F.W3. knows the rules of qualifications and performance and the most common complications of basic surgeries and invasive diagnostic and therapeutic procedures; F.W14. knows in the basic scope the problem of surgical transplantation, indications for transplantation irreversibly damaged organs and tissues and related procedures; F.U1. assists with typical surgery, prepares operative field and locally anesthetized the operated area; F.U2. uses basic medical sharps; F.U3. apply the principles of aseptic and antiseptic; F.U4. supplies a simple wound, assumed and changes sterile surgical dressing; F.U5. assumes the peripheral venous catheter; F.U6. examines nipples, lymph nodes, thyroid gland and the abdominal cavity in terms of acute abdomen and exercise test with finger through the anus;
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## Subject's learning outcomes

Code	Outcomes in terms of	Effects	Examination methods
<b>Knowledge - Student knows and understands:</b>			
W1	the causes, symptoms, diagnostic and therapeutic management principles for the most common diseases requiring surgical intervention, taking into account the distinctness of childhood age, including in particular: 1) acute and chronic abdominal diseases, 2) thoracic diseases, 3) diseases of extremities and head, 4) fractures of bones and injuries to organs	F.W1	test, gap filling test
W2	selected issues in the field of pediatric surgery, including traumatology and otorhinolaryngology, as well as acquired defects and diseases being indications for surgical treatment in children	F.W2	test
W3	rules of qualification for basic surgical procedures and invasive diagnostic and therapeutic procedures, rules of their performance and the most frequent complications	F.W3	test

W4	principles of perioperative safety, patient preparation for surgery, general and local anesthesia and controlled sedation	F.W4	test
W5	postoperative treatment with analgesic therapy and postoperative monitoring	F.W5	test
W6	the causes, symptoms, principles of diagnosis and therapeutic management of the most common diseases requiring surgical intervention, taking into account the distinctness of childhood age and in particular: a) diseases of arterial and venous vessels b) diseases of the urinary tract c) heart and blood vessel diseases d) craniofacial diseases, acute and chronic diseases of the central nervous system	F.W17	test
W7	the rules of qualification, what they consist of, how they take place and what are the possible complications and consequences of surgical procedures: a) removal of appendix, gallbladder b) excision of the thyroid, parathyroid, adrenal glands c) excision of part and entirety of the stomach, large intestine d) abdominal hernias, using synthetic mesh e) surgical treatment of obesity	F.W20	test
W8	the qualifications rules, knows what they are, how they work and what are the possible consequences and complications of the following procedures: a) percutaneous and intraductive abdominal organ ultrasonography f) b) endoscopic gastrointestinal diagnostic and therapeutic procedures c) endoscopic diagnostic and respiratory therapeutic procedures (bronchoscopy, endoscopic ultrasound bronchoscopy) d) endoscopic diagnostic and therapeutic procedures for the urinary tract (cystoscopy) e) endoscopic diagnostic and therapeutic procedures for the locomotor system (arthroscopy) f) screening tests used for the early detection of gastrointestinal neoplasms	F.W21	test
W9	the most common complications of the procedures listed in F.W2	F.W18	test
W10	in the basic scope, the issues of surgical transplantation, indications for transplantation of irreversibly damaged organs and tissues and the procedures related thereto	F.W14	test
<b>Skills - Student can:</b>			
U1	assist in a typical surgical procedure, prepare the surgical field and apply local anesthesia to the operated area	F.U1	booklet of practical skills, classroom observation
U2	use basic surgical instruments	F.U2	booklet of practical skills, classroom observation
U3	adhere to the principles of asepsis and antisepsis	F.U3	booklet of practical skills, classroom observation
U4	manage a simple wound, put on and change a sterile surgical dressing	F.U4	booklet of practical skills, classroom observation
U5	make a peripheral puncture	F.U5	booklet of practical skills, classroom observation

U6	examine breasts, lymph nodes, thyroid gland and abdominal cavity in terms of acute abdomen and perform digital rectal examination	F.U6	booklet of practical skills, classroom observation
U7	manage external bleeding	F.U9	booklet of practical skills, classroom observation
U8	can tie a single and surgical knot	F.U28	booklet of practical skills, classroom observation
U9	can perform and interpret FAST ultrasound (Focused Assessment with Sonography for Trauma)	F.U30	booklet of practical skills, classroom observation
U10	insert a drain into the pleural cavity and connect the set for an active pleural drain	F.U31	booklet of practical skills, classroom observation
U11	insert a catheter into the bladder	F.U32	booklet of practical skills, classroom observation
U12	to take the informed and legally effective consent: a) for high-risk diagnostic procedures (e.g. gastroscopy, colonoscopy), endoscopic retrograde cholangiopancreatography) b) for high-risk diagnostic procedures (transcutaneous biopsy under control) USG) c) surgery to remove the gallbladder	F.U33	booklet of practical skills, classroom observation
U13	to pass on information about the death of a close friend and relative	F.U34	booklet of practical skills, classroom observation
U14	assess the indications for suprapubic puncture and participate in its performance	F.U23	booklet of practical skills, classroom observation
U15	assist in typical urological procedures (diagnostic and therapeutic endoscopy of the urinary tract, lithotripsy, prostate puncture)	F.U24	booklet of practical skills, classroom observation
U16	can examine the breasts, the abdomen and perform a digital rectal examination	F.U29	booklet of practical skills, classroom observation
<b>Social competences - Student is ready to:</b>			
K1	to be guided by the well-being of a patient	O.K2	classroom observation
K2	respect medical confidentiality and patients' rights	O.K3	classroom observation
K3	take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease	O.K4	classroom observation
K4	to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures	O.K1	classroom observation

## Calculation of ECTS points

### Semester 5, Semester 6

Activity form	Activity hours*
seminar	35
classes	57
lecture	34

preparation for classes	30
preparation for examination	30
<b>Student workload</b>	<b>Hours</b> 186
<b>Workload involving teacher</b>	<b>Hours</b> 126
<b>Practical workload</b>	<b>Hours</b> 57

\* hour means 45 minutes

#### Semester 7, Semester 8

Activity form	Activity hours*
lecture	24
seminar	8
classes	44
simulations	12
preparation for classes	30
preparation for colloquium	30
<b>Student workload</b>	<b>Hours</b> 148
<b>Workload involving teacher</b>	<b>Hours</b> 88
<b>Practical workload</b>	<b>Hours</b> 56

\* hour means 45 minutes

#### Semester 9, Semester 10

Activity form	Activity hours*
lecture	6
seminar	33
classes	42
preparation for classes	30
preparation for examination	30

<b>Student workload</b>	<b>Hours</b> 141
<b>Workload involving teacher</b>	<b>Hours</b> 81
<b>Practical workload</b>	<b>Hours</b> 42

\* hour means 45 minutes

### Semester 11, Semester 12

<b>Activity form</b>	<b>Activity hours*</b>
clinical classes	120
preparation for classes	30
preparation for examination	30
<b>Student workload</b>	<b>Hours</b> 180
<b>Workload involving teacher</b>	<b>Hours</b> 120
<b>Practical workload</b>	<b>Hours</b> 120

\* hour means 45 minutes

## Study content

<b>No.</b>	<b>Course content</b>	<b>Subject's learning outcomes</b>	<b>Activities</b>
1.	Examination and diagnosis of the patient with acute abdomen	W1, U12, U16, U6, U9, K2	seminar, clinical classes, lecture
2.	Body composition	W6	seminar
3.	Shock	W1, W6, U5, U7, U9	seminar, clinical classes, lecture
4.	Acute abdomen	W1, W3, W4, W7, U1, U2, U8	seminar, clinical classes, lecture
5.	Hernias	W1, W3	seminar, clinical classes
6.	Thyroid and parathyroid glands.	W3, W7	seminar, clinical classes
7.	Congenital malformations of the gastrointestinal tract	W2	seminar, clinical classes, lecture
8.	Burns in children	W2, U3, U4	seminar, clinical classes
9.	Pediatric thoracic surgery	W1, W2, U10	seminar, clinical classes
10.	Head injuries in children. Congenital malformations of the nervous system.	W2, K1, K4	seminar, clinical classes, lecture

11.	Congenital malformations of the urinary tract.	W2, U11	seminar, clinical classes, lecture
12.	Congenital heart defects.	W1, W10, W6, U7	seminar, clinical classes, lecture
13.	Thoracic cavity diseases.	W1	seminar, clinical classes, lecture
14.	Diseases of the bile ducts.	W3, W7, W9, U1, U2, U4	seminar, clinical classes
15.	Colon cancer.	W1, W7, W9, U13	seminar, clinical classes
16.	Bariatric and metabolic surgery	W4, W7, K3, K4	seminar, clinical classes, lecture
17.	Perioperative care (ERAS).	W3, W4, W5	seminar, clinical classes
18.	Pancreas.	W1	seminar, clinical classes, lecture
19.	Rules for qualifying for cardiac surgery and postoperative management.	W6	seminar, clinical classes
20.	Surgery in acute cardiological conditions ("acute heart").	W6	seminar, clinical classes
21.	Principles of anticoagulation (cardiovascular system).	W6	seminar, clinical classes
22.	Anatomy. Abdominal and pelvic walls - abdominal wall structure - groin anatomical structures - laparoscopic images of inguinal region anatomy on a corpse - pelvic wall construction	W1	seminar, clinical classes
23.	Anatomy. Stomach pain - innervation of the abdominal walls and abdominal organs - innervation of the pelvic walls and pelvic organs - visceral pain - somatic painsc	W1	seminar, clinical classes
24.	Abdominal hernia anatomy.	W1	seminar, clinical classes
25.	Anatomy. Peritoneum - peritoneal cavities - mesenteries and their contents	W1	seminar, clinical classes
26.	Anatomy. Glandular floor - topographic anatomy of the esophagus - construction of the esophagus wall - stomach topographic anatomy - vascularization and innervation of the stomach - duodenum - pancreas - liver - spleen	W1	seminar, clinical classes
27.	Anatomy: Pelvic organs - rectum	W1	seminar, clinical classes
28.	Hepatobiliary surgery.	W1, W7	seminar, clinical classes
29.	Gastric surgery	W1, W3, W7	seminar, clinical classes
30.	Endoscopy	W8, U12, U9	seminar, clinical classes
31.	Brest surgery	W1, U6	seminar, clinical classes

32.	Pancreatic cancer	W1, W3	lecture
33.	Gastric cancer	W1, W7	lecture
34.	Colorectal cancer	W1, W7	lecture
35.	Introduction to urology seminars. The role of a family doctor in diagnosing urological diseases. Symptomatology of urological diseases. Imaging diagnostics in urology (USG; CT; MR; scintigraphy; urodynamics). Urological instruments. Basic urological procedures. Specific and unspecific inflammations of the genitourinary organs.	W1, U11, U14, U15	seminar, clinical classes
36.	Neoplasms of urinary organs in both sexes and male reproductive system: kidneys, ureter, bladder, urethra, prostate, testicles, penis.	W1, U11, U14, U15	seminar, clinical classes
37.	Urological emergencies. Urogenital injuries - conservative and surgical treatment.	W1, U11, U14, U15	seminar, clinical classes
38.	Male genital diseases. Diseases of the prostate gland. Andropause. Erectile dysfunction.	W1, U11, U14, U15	seminar, clinical classes
39.	Urolithiasis including modern treatment methods: ESWL, PCNL, URS. Urinary incontinence in men and women. Basic knowledge of gynecological urology.	W1, U11, U14, U15	seminar, clinical classes
40.	Selected problems of maxillofacial surgery.	W6	seminar, clinical classes
41.	Intracranial hypertension. Clinical symptomatology, recognition. Treatment. Craniocerebral injuries. Fractures of the skull bones (vaults and bases). Intracranial hematomas. Diffuse axonal injury.	W6	seminar, clinical classes
42.	Tumors of the brain and spinal canal.	W6	seminar, clinical classes
43.	Central nervous system malformations.	W6	seminar, clinical classes
44.	Spinal pain syndromes.	W6	seminar, clinical classes
45.	Laboratory teaching of surgical skills.	U13, U2, U3, U4, U5, U8	classes, simulations

## Course advanced

### Semester 5, Semester 6

#### Teaching methods:

clinical classes, OSCE examination, lecture, problem solving method, seminar, simulation, workshop

Activities	Examination methods	Credit conditions
seminar	classroom observation, test	Student activity, presence
classes	booklet of practical skills	Student activity, presence
lecture	test	Written or oral exam, presence

### Semester 7, Semester 8



**Teaching methods:**

case study, clinical classes, problem solving method, seminar, simulation, workshop, lecture, PBL Problem Based Learning, practical classes

Activities	Examination methods	Credit conditions
lecture	gap filling test	Student Activity, presence
seminar	classroom observation	Student activity, presence
classes	classroom observation	Student activity, presence
simulations	classroom observation	Oral exam, presence

**Semester 9, Semester 10****Teaching methods:**

case study, clinical classes, workshop, lecture, practical classes

Activities	Examination methods	Credit conditions
lecture	gap filling test	Oral exam, presence
seminar	classroom observation	Student activity, presence
classes	booklet of practical skills	Student activity, presence

**Semester 11, Semester 12****Teaching methods:**

clinical classes, simulation, lecture

Activities	Examination methods	Credit conditions
clinical classes	classroom observation	Student activity, presence, Written exam

**Additional info**

To complete the course, the student must be present at all classes. In the case of the student's absence during classes, it is necessary to make up for the absence during the medical duty.

Single-choice test will be required at the end of the course. In order to pass, it will be required to obtain 60% correct answers.

**Entry requirements**

Passed Anatomy and Laboratory Training of Clinical Skills

Class attendance is obligatory

## Literature

### **Obligatory**

1. Schwartz's Principles of Surgery, 10th ed.
2. Oxford Handbook of Clinical Surgery, 4th ed.

### **Optional**

1. Sabiston Textbook of Surgery, 19th ed.
2. Principles and Practice of Surgery, Garden, 7th ed.

## Standard effects

Code	Content
F.U1	assist in a typical surgical procedure, prepare the surgical field and apply local anesthesia to the operated area
F.U2	use basic surgical instruments
F.U3	adhere to the principles of asepsis and antisepsis
F.U4	manage a simple wound, put on and change a sterile surgical dressing
F.U5	make a peripheral puncture
F.U6	examine breasts, lymph nodes, thyroid gland and abdominal cavity in terms of acute abdomen and perform digital rectal examination
F.U9	manage external bleeding
F.U23	assess the indications for suprapubic puncture and participate in its performance
F.U24	assist in typical urological procedures (diagnostic and therapeutic endoscopy of the urinary tract, lithotripsy, prostate puncture)
F.U28	can tie a single and surgical knot
F.U29	can examine the breasts, the abdomen and perform a digital rectal examination
F.U30	can perform and interpret FAST ultrasound (Focused Assessment with Sonography for Trauma)
F.U31	insert a drain into the pleural cavity and connect the set for an active pleural drain
F.U32	insert a catheter into the bladder
F.U33	to take the informed and legally effective consent: a) for high-risk diagnostic procedures (e.g. gastroscopy, colonoscopy), endoscopic retrograde cholangiopancreatography) b) for high-risk diagnostic procedures (transcutaneous biopsy under control) USG) c) surgery to remove the gallbladder
F.U34	to pass on information about the death of a close friend and relative
F.W1	the causes, symptoms, diagnostic and therapeutic management principles for the most common diseases requiring surgical intervention, taking into account the distinctness of childhood age, including in particular: 1) acute and chronic abdominal diseases, 2) thoracic diseases, 3) diseases of extremities and head, 4) fractures of bones and injuries to organs
F.W2	selected issues in the field of pediatric surgery, including traumatology and otorhinolaryngology, as well as acquired defects and diseases being indications for surgical treatment in children
F.W3	rules of qualification for basic surgical procedures and invasive diagnostic and therapeutic procedures, rules of their performance and the most frequent complications
F.W4	principles of perioperative safety, patient preparation for surgery, general and local anesthesia and controlled sedation
F.W5	postoperative treatment with analgesic therapy and postoperative monitoring
F.W14	in the basic scope, the issues of surgical transplantation, indications for transplantation of irreversibly damaged organs and tissues and the procedures related thereto
F.W17	the causes, symptoms, principles of diagnosis and therapeutic management of the most common diseases requiring surgical intervention, taking into account the distinctness of childhood age and in particular: a) diseases of arterial and venous vessels b) diseases of the urinary tract c) heart and blood vessel diseases d) craniofacial diseases, acute and chronic diseases of the central nervous system
F.W18	the most common complications of the procedures listed in F.W2
F.W20	the rules of qualification, what they consist of, how they take place and what are the possible complications and consequences of surgical procedures: a) removal of appendix, gallbladder b) excision of the thyroid, parathyroid, adrenal glands c) excision of part and entirety of the stomach, large intestine d) abdominal hernias, using synthetic mesh e) surgical treatment of obesity

Code	Content
F.W21	the qualifications rules, knows what they are, how they work and what are the possible consequences and complications of the following procedures: a) percutaneous and intraductive abdominal organ ultrasonography f) b) endoscopic gastrointestinal diagnostic and therapeutic procedures c) endoscopic diagnostic and respiratory therapeutic procedures (bronchoscopy, endoscopic ultrasound bronchoscopy) d) endoscopic diagnostic and therapeutic procedures for the urinary tract (cystoscopy) e) endoscopic diagnostic and therapeutic procedures for the locomotor system (arthroscopy) f) screening tests used for the early detection of gastrointestinal neoplasms
O.K1	to establish and maintain deep and respectful contact with patients and to show understanding for differences in world views and cultures
O.K2	to be guided by the well-being of a patient
O.K3	respect medical confidentiality and patients' rights
O.K4	take actions towards the patient on the basis of ethical norms and principles, with an awareness of the social determinants and limitations of the disease