INFORMATION ABOUT THE COURSE

Surgery

1. Basic information

Field of studies field of medical and health sciences, discipline: medical sciences **Unit responsible for the field of studies** Faculty of Medicine Bydgoszcz University of Science and Technology **Level of studies** Uniform master's studies **Profile of studies** General academic **Form of studies** Full-time	**Studies cycle** …….. **Course code** 17-EMS-SUR-SP2 **Language** English **Obligatory** Yes

Prerequisites	Basic knowledge of anatomy, physiology, and pathophysiology. Verification method: Passing the introductory courses is equivalent to fulfilling the prerequisites for the Surgery course.
Introductory courses	Anatomy, Physiology with elements of clinical physiology, Pathophysiology
Coordinator	Prof. Radosław Litwinowicz

Study period	**Form of assessment** **Form and hours of classes**	**ECTS credits**
Summer semester	Exam Lecture 30h Exercise 30h Seminar 10h Simulation exercise 15h	5.0

2. Learning outcomes

Code	**Description of learning outcomes**	**Learning outcomes reference**
Knowledge (student knows and understands):		
K1	Graduates know and understand the causes, symptoms, principles of diagnosis, and therapeutic management of the most common diseases requiring surgical treatment in adults: 1) acute and chronic abdominal diseases 2) chest diseases 3) diseases of the limbs, head, and neck 4) bone fractures and organ injuries 5) neoplasms	F.W1.
K2	The graduate knows and understands the causes, symptoms, principles of diagnosis and therapeutic management of the most common congenital defects and diseases requiring surgical treatment in children	F.W2.

K3	The graduate knows and understands basic classical and minimally invasive surgical techniques	F.W3.
K4	Graduates know and understand the principles of qualifying for basic surgical procedures and invasive diagnostic and therapeutic procedures, as well as the most common complications	F.W4.
K5	Graduates know and understand the principles of perioperative safety, preparing patients for surgery, performing general and local anesthesia, and controlled sedation	F.W6.
K6	The graduate knows and understands the principles of postoperative treatment with pain therapy and postoperative monitoring	F.W7.
K7	The graduate knows and understands the symptoms and course of diseases	O.W2.
K8	The graduate knows and understands the surgical procedures appropriate for specific medical conditions	O.W3.
Abilities (student can do/perform):		
A1	The graduate is able to surgically wash their hands, put on sterile gloves, dress for surgery or a procedure requiring sterility, prepare the surgical field in accordance with the principles of asepsis, and participate in surgical procedures.	F.U1.
A2	The graduate is able to apply and change sterile dressings.	F.U2.
A3	Graduates are able to assess and treat simple wounds, including local anesthesia (superficial, infiltration), apply and remove surgical sutures, and apply and change sterile surgical dressings.	F.U3.
A4	Graduates are able to recognize the most common life-threatening conditions, including the use of various imaging techniques.	F.U4.
A5	Graduates are able to convey bad news using a selected protocol, e.g.: 1) SPIKES: S (Setting – appropriate environment), P (Perception – understanding the interlocutor's state of knowledge), I (Invitation/Information – invitation to talk/informing), K (Knowledge – conveying bad news), E (Emotions and empathy), S (Strategy and summary), 2) EMPATHY: E (Emotions), M (Setting), P (Patient's perspective), A (Appropriate language), T (Message content), I (Additional information), A (Annotation in documentation),3) ABCDE: A (Advance preparation – preparation for the conversation), B (Build therapeutic environment – establishing good contact with the family), C (Communicate well – conveying bad news, taking into account the principles of communication), D	F.U21.

	(Dealing with reactions – dealing with difficult emotions), E (Encourage and validate emotions – the right to show emotions, redirect them and respond appropriately, aiming to end the meeting) – including supporting the family in the process of the patient's dignified death and informing the family about the patient's death	
A6	The graduate is able to obtain information from team members while respecting their diverse opinions and specialist competences, and to take this information into account in the patient's diagnostic and therapeutic plan, as well as to apply the ATMIST and RSVP/ISBAR protocols.	F.U22.
A7	The graduate is able to recognize medical problems and determine priorities in medical treatment	O.U1.
A8	The graduate is able to recognize life-threatening conditions that require immediate medical intervention	O.U2.
A9	The graduate is able to plan diagnostic procedures and interpret their results	O.U3.
A10	The graduate is able to implement appropriate and safe therapeutic procedures and predict their effects	O.U4.
A11	Graduates are able to plan their own educational activities and continuously improve their knowledge.	O.U5.
A12	Graduates are able to communicate with patients and their families in an atmosphere of trust, taking into account the needs of the patient, and convey unfavorable information using the principles of professional communication.	O.U7.
Social skills (the student is ready to):		
S1	Graduates are prepared to draw conclusions from their own measurements or observations.	O.K8.
S2	Graduates are prepared to implement the principles of professional collegiality and teamwork, including with representatives of other medical professions, also in a multicultural and multinational environment.	O.K9.
S3	Graduates are prepared to be guided by the well-being of the patient.	O.K2.

3. Programme contents

No.	Programme contents	Form of studies	Learning outcomes covered by the programme content

1	1. Fundamentals of surgical anatomy: circulatory system, digestive system, urinary system, respiratory system. 2. Principles of asepsis and antisepsis in surgery. 3. Surgical procedures: types, objectives, and techniques. 4. Preoperative assessment of the patient: medical history, physical examination, laboratory and imaging tests. 5. Preparing the patient for surgery: preoperative management, risk factors. 6. General and local anesthesia: types, principles of use, complications. 7. Postoperative care: patient monitoring, prevention of complications, pain management. 8. Trauma surgery: assessment and management of injuries to various parts of the body. 9. Vascular surgery: procedures on arteries and veins, vascular reconstruction. 10. Oncological surgery: principles of surgical treatment of tumors, resection margins, lymphadenectomy. 11. Laparoscopic surgery: application, techniques, benefits, and limitations. 12. Pediatric surgery: specifics and surgical techniques in children. 13. Endocrine surgery: thyroid, parathyroid, and adrenal gland surgery. 14. Reconstructive surgery: transplants, tissue and organ reconstruction. 15. Ethics in surgery: decision-making, principles of the doctor-patient relationship, professional responsibility.	Lecture	K1, K2, K3, K4, K5, K6, K7, K8
2	1. Assessing the patient's condition before surgery: conducting an interview, physical examination, interpreting diagnostic test results. 2. Planning and preparing the patient for surgery: assessing surgical risk, discussing the procedure with the patient, and obtaining consent for the procedure. 3. Assisting in surgical procedures: participating in surgeries under the supervision of an experienced surgeon, familiarizing oneself with surgical techniques. 4. Providing first aid in surgical emergencies: responding to injuries, hemorrhages, cardiac arrest. 5. Diagnosing and treating injuries: identifying and assessing bodily injuries, performing stabilization and treatment procedures. 6. Implementing infection prevention procedures: applying the principles of asepsis and antisepsis during procedures and postoperative care. 7. Conducting surgical consultations: assessing the patient's condition in hospital wards, discussing the treatment plan with the medical team. 8. Interpretation of imaging and laboratory test results: analysis of diagnostic test results in the context of clinical decisions. 9. Discussion of clinical cases: analysis of medical history, diagnostic and therapeutic procedures, discussion of possible complications.	Exercise, Simulation exercise	A1, A2, A3, A4, A5, A6, A7, A8, A9, A10, A11, A12, S1, S2, S3

	10. Providing support to patients and their families: communication with the patient before and after surgery, providing information about the procedure and recovery.		
3	1. Discussion of clinical cases related to general surgery. 2. Analysis and presentation of diagnostic test results in the context of surgical decisions. 3. Discussion of current scientific publications in the field of surgery. 4. Workshops on patient communication: how to convey information about the operation, preparation for surgery, and postoperative care. 5. Debates on controversial issues in surgery, e.g., the use of new surgical techniques or the choice of treatment methods in a specific clinical situation.	Seminar	K1, K2, K3, K4, K5, K6, K7, K8, A5, A6, A9, A11, A12, S1, S2, S3

4. Methods of verifying and assessing the learning outcomes achieved by the student

Winter semester

Form of studies		
Lecture	**Methods of studies form:**	
	Lecture	
	Methods of verification:	**Involvement:**
	Written exam	100%
	Conditions for passing the course:	
	The prerequisite for passing the course is obtaining a passing grade on the written exam. Written exam: single-choice test, 50 questions. Passing threshold: 60%. Detailed assessment criteria are available in the PBŚ Study Regulations.	
Exercise	**Methods of studies form:**	
	Clinical Exercise, Laboratory exercise, Discussion, Case study	
	Methods of verification:	**Involvement:**
	Colloquium	80%
	Observation	20%
	Conditions for passing the course:	
	The conditions for passing the course are: 1) attendance; 2) a test; 3) passing the course by the instructor based on the assessment of preparation for classes, continuous observation, and assessment of activity during classes, including the performance of procedures covered by the course topics.	
Seminar	**Methods of studies form:**	
	Discussion, Case study, Group work	
	Methods of verification:	**Involvement:**
	Presentation	70%

	Report	30%
	Conditions for passing the course:	
	Preparation of a multimedia presentation on a topic specified by the instructor. Preparation of reports on defined diagnostic assessments and therapeutic treatment plans as part of individual or group work, and obtaining a positive assessment for the work.	
Simulation exercise	**Methods of studies form:**	
	Discussion, Showcase, Group work, Simulation exercise in Medical Simulation Centre	
	Methods of verification:	**Involvement:**
	Observation	80%
	Practical test	20%
	Conditions for passing the course:	
	Correct completion of the task in a practical test under simulated conditions.	

Learning outcomes	**Methods of verification**					
	Written exam	Colloquium	Observation	Report	Presentation	Practical test
K1	X	X	X	X	X	
K2	X	X	X	X	X	
K3	X	X	X	X	X	
K4	X	X	X	X		
K5	X	X	X	X		
K6	X	X	X	X		
K7	X	X	X	X	X	
K8	X	X	X	X	X	
A1			X			X
A2			X			X
A3			X			X
A4			X			X
A5			X			X
A6			X			X
A7			X			X
A8			X			X
A9			X			X
A10			X			X

A11			X			X
A12			X			X
S1			X			X
S2			X			X
S3			X	X	X	X

5. Student workload – balance of hours and ECTS credits

Students activity		**Student workload Number of hours**
Classes conducted with the direct participation of an academic teacher or other persons conducting classes	Lecture	30
	Exercise	30
	Seminar	10
	Simulation exercise	15
Student's own work	Preparing for classes	10
	Studying literature	10
	Preparing a report	8
	Preparing a presentation	8
	Preparing for a test	10
	Preparing for an exam	16
Total student workload		147
ECTS		5

One (teaching) hour is 45 minutes.

6. Literature

The list of required and recommended literature will be provided by the lecturer at the first meeting.