



## Course syllabus - part A Anesthesiology and Intensive Care

**48SJ-AIC**  
**ECTS: 3.00**  
**CYCLE: 2023L**

### SUBJECT MATTER CONTENT

#### LECTURE

The construction of the camera to the anesthesia. Basics of ventilation replacement. Ventilation in the face mask. Rules intubation. Installing non-invasive methods for monitoring during anesthesia. Opioid analgesics; pharmacokinetics, pharmacodynamics, side effects Regional anesthesia - methods of identification of neural structures Side effects of local anesthesia - the nature of different types of anesthesia non-invasive and invasive methods of treatment of postoperative pain. Installing non-invasive monitoring in the ICU. Methods of reactive oxygen therapy. Non-invasive ventilation. Basic modes of positive pressure ventilation. Practical aspects of therapy katecholowymi amines, and drugs acting on the cardiovascular system. Rules of conduct antibiotic. Nutritional therapy in OIT

#### SEMINAR

1.Regional anesthesia, pharmacology of local anesthetics. 2.Patients care during the perioperative period - introduction. 3. Pharmacology of general anesthesia drugs. 4. Multiorgan failure: cardiovascular, respiratory and CNS systems. 5. Multiorgan failure: endocrinological and gastroenterological systems.

#### CLASSES

Anaesthesiology and Intensive Care Medicine in Poland and in the world: the first steps, directions of the development and current issues. 2. Post-resuscitation syndrome. 3. General anaesthesia - narcosis. 4. Regional anaesthesia. 5. Anaesthesia of patients with high-risk of complications. 6. Peculiarity of anaesthetic management in short and emergency surgical procedures. 7. New model of hemostasis - diagnostic and therapeutic aspects. 8. Sepsis - SIRS - severe sepsis - septic shock: principles of diagnosis and management. 9. Diagnosis and management of acute pain

#### TEACHING OBJECTIVE

Introducing the student to work in the intensive care, acquiring knowledge and skills in the field : recognizing life-threatening conditions, taking appropriate therapeutic interventions in patients with organ dysfunctions or insufficiencies. 2/ The ability to assess the patient's condition in terms of surgery, selection of the appropriate type of anesthesia, preparation of the patient for surgery, principles of postoperative pain treatment (including regional anesthesia techniques). 3/ Ethical dilemmas during care of critically ill patients

**DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE  
IN RELATION TO THE DESCRIPTION OF THE  
CHARACTERISTICS OF THE SECOND LEVEL LEARNING  
OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE  
POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE  
SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF**

**Legal acts specifying learning outcomes:**  
672/2020

**Disciplines:** medical sciences

**Status of the**

**course:**Obligatoryjny

**Group of courses:**B -

przedmioty kierunkowe

**Code:** ISCED 0912

**Field of study:**Medicine

**Scope of education:**

**Profile of education:**

General academic

**Form of studies:** full-time

**Level of studies:** uniform

master's studies

**Year/semester:** 5/10

**Types of classes:** Lecture,  
Seminar, Classes

**Number of hours in**

**semester:**Lecture: 5.00,

Seminar: 10.00, Classes:

45.00

**Language of**

**instruction:**English

**Introductory subject:**

anatomy, physiology,

pathophysiology,

pharmacology

**Prerequisites:** knowledge of

the current ALS, BLS

guidelines in adults and

children

**Name of the organisational unit conducting the**

**course:**Katedra Anestezjologii

i Intensywnej Terapii

**Person responsible for the**

**realization of the course:**dr

hab. n. med. Dariusz

Onichimowski, prof. UWM,

prof. dr hab. n. med. Ewa

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**Additional remarks:**

## STUDY:

### Symbols for outcomes related to the discipline:

M/NMA\_P7S\_KO+++ , M/NMA\_P7S\_WG+++ ,  
M/NMA\_P7S\_UW+++ , M/NMA\_P7S\_KR++ ,  
M/NM+++

### Symbols for outcomes related to the field of study:

KA7\_WG12+ , M/NM\_F.W15.+ , K.4.+ ,  
M/NM\_F.W5.+ , E.U37.+ , M/NM\_C.W.40.+ ,  
D.U6.+ , E.U16.+ , E.U7.+ , F.U22.+ , E.U30.+ ,  
D.U7.+ , K.2.+ , M/NM\_D.W18.+ , F.U12.+ ,  
M/NM\_E.W42.+ , M/NM\_B.W20.+ ,  
M/NM\_E.W29.+ , C.U20.+ , E.U29.+ , KA7\_WG15+ ,  
F.U21.+ , E.U14.+ , M/NM\_F.W4.+ , K.1.+ ,  
M/NM\_A.W5.+ , E.U25.+ , M/NM\_C.W.38.+ ,  
E.U32.+ , KA7\_WG6+ , M/NM\_B.W1.+ ,  
M/NM\_C.W30+ , C.U10.+ , M/NM\_C.W29.+ ,  
M/NM\_B.W24.+ , E.U24.+ , M/NM\_C.W14.+ ,  
M/NM\_F.W6.+ , F.U3.+

## LEARNING OUTCOMES:

### Knowledge:

- W1 - the basic principles of pharmacotherapy;
- W2 - the principles of treating pain, including neoplastic and chronic pain;
- W3 - the indications for monitored therapy
- W4 - the principles of suspecting and recognising brain death
- W5 - the rules of perioperative safety, patient preparation for the surgery, performance of general and local anaesthesia and controlled sedation;
- W6 - post-operative treatment with pain therapy and post-operative monitoring;
- W7 - indications for and the principles of implementing intensive care
- W8 - różne modele komunikacji z pacjentem i jego rodziną oraz z zespołem interdyscyplinarnym;
- W9 - principles of dietary treatment and selected aspects of diet therapy in various health and disease states.
- W10 - theoretical basis for performing selected standard and complex medical procedures and skills;
- W11 - the basic cell structures and their functional specialisations;
- W12 - the water and electrolyte management in biological systems;
- W13 - the basis of nervous system stimulation and conduction, including higher level nervous activity, as well as physiology of striated and smooth muscles plus blood functions
- W14 - the basic quantitative parameters describing the efficiency of individual systems and organs, including the standard ranges and the demographic factors affecting the parameter values;
- W15 - the problem of resistance to medicinal drugs, including multi-drug resistance;
- W16 - the impact of abiotic and biotic environmental factors (viruses, bacteria) on the human organism, human populations, and their routes of entry into the human organism;
- W17 - the definition and pathophysiology of shock and in particular differentiation of the causes of shock and multiple-organ failure
- W18 - the etiology of haemodynamic disorders, regressive and progressive changes
- W19 - the rules of team work

### Skills:

- U1 - interpret the results of microbiological tests
- U2 - recognise immediately life-threatening conditions
- U3 - recognise the patient in agony and confirm his/her death;
- U4 - evaluate the overall condition, state of consciousness, and awareness of the patient;
- U5 - interpret the results of laboratory tests and identify the causes of deviations from the norm;
- U6 - plan specialist consultations
- U7 - recognise symptoms of growing intracranial pressure

U8 - describe the changes in the functioning of the organism in homeostatic distortions, particularly identify its integrated response to physical effort, exposure to high and low temperature, loss of blood or water, sudden verticalisation, and transition from sleep to wakefulness.

U9 - inform the patient of the purpose, course, and potential risks inherent in the proposed diagnostic or therapeutic actions, and obtain his/her informed consent to such actions

U10 - plan diagnostic, therapeutic, and prophylactic procedures;

U11 - apply nutritional treatment, including enteral and parenteral feeding

U12 - 1) taking the body temperature (both external and internal), the heart rate, the arterial pressure applying a non-invasive method, 2) monitoring the vital signs with the use of the patient monitor, pulse oximetry, 3) conducting spirometry tests, oxygentherapy, assisted and controlled ventilation, 4) inserting the oropharyngeal tube,

U13 - . . assist in the following medical procedures and operations: 1) transfusing blood and blood product preparations, 2) performing pleural drainage, 3) performing pericardiocentesis, 4) performing paracentesis, 5) performing lumbar puncture, 6) performing thin needle biopsy, 7) performing epicutaneous tests, 8) performing intradermal and scarification tests and interpreting their results;

U14 - engage the patient in the therapeutic process;

U15 - monitor the patient in the post-operative period based on core vital parameters

U16 - assess the condition of an unconscious patient in accordance with international point scales;

U17 - apply the rules of asepsis and antiseptics;

### **Social competence:**

K1 - taking actions towards the patient based on ethical principles, with the awareness of social conditions and limitations resulting from the disease;

K2 - be guided by the good of the patient;

K3 - establishing and maintaining a deep and respectful contact with the patient, as well as showing understanding for worldview and cultural differences;

### **TEACHING FORMS AND METHODS:**

Lecture(W1;W2;W3;W4;W5;W6;W7;W8;W9;W10;W11;W12;W13;W14;W15;W16;W17;W18;W19;U1;U2;U3;U4;U5;U6;U7;U8;U9;U10;U11;U12;U13;U14;U15;U16;U17;K1;K2;K3;):lecture with multimedia presentation

Seminar(W1;W2;W3;W4;W5;W6;W7;W8;W9;W10;W11;W12;W13;W14;W15;W16;W17;W18;W19;U1;U2;U3;U4;U5;U6;U7;U8;U9;U10;U11;U12;U13;U14;U15;U16;U17;K1;K2;K3;):Discussion of clinical cases

Classes(W1;W2;W3;W4;W5;W6;W7;W8;W9;W10;W11;W12;W13;W14;W15;W16;W17;W18;W19;U1;U2;U3;U4;U5;U6;U7;U8;U9;U10;U11;U12;U13;U14;U15;U16;U17;K1;K2;K3;):The test of 10 questions,

### **FORM AND CONDITIONS OF VERIFYING LEARNING**

#### **OUTCOMES:**

Lecture (Written exam) - test of 50 questions, the condition for passing is to obtain 60% of correct answers -

Seminar (Oral test) - Discussion of clinical cases -

Classes (Colloquium test) - test of 10 questions, the condition for passing is to obtain 60% of correct answers -

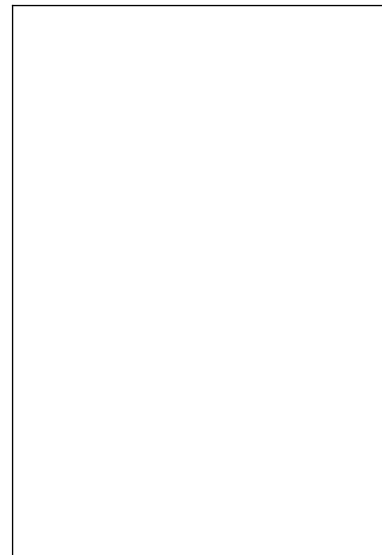
#### **BASIC LITERATURE:**

1. Tim Smith, Ted Lin, *Fundamentals of Anaesthesia 4th edition* by Colin Pinnock, Wyd. Cambridge University Press, R. 2016

2. Ronald Miller Co, *Miller's, Anaesthesia 8th Revised edition* by, Wyd. wyd. Elsevier Health Sciences., R. 2015

**SUPPLEMENTARY LITERATURE:**

1. <https://www.youtube.com/watch?v=XK8154sZn84>
2. [https://www.youtube.com/watch?v=AkKXrD\\_-S2o](https://www.youtube.com/watch?v=AkKXrD_-S2o)
3. [https://www.youtube.com/watch?v=\\_Ko-m4kFOil](https://www.youtube.com/watch?v=_Ko-m4kFOil)
4. <https://www.youtube.com/watch?v=dORH20x32wY>
5. [https://www.youtube.com/watch?v=OshfCqYpZ\\_4](https://www.youtube.com/watch?v=OshfCqYpZ_4)
6. <https://www.youtube.com/watch?v=WJuRHvMFS2Q>
7. [https://www.youtube.com/watch?v=7cEs0oH\\_pcl](https://www.youtube.com/watch?v=7cEs0oH_pcl)
8. <https://www.youtube.com/watch?v=h4uvHsx1kj8>
9. <https://www.youtube.com/watch?v=q3UNsNtFHLA>
10. [https://www.youtube.com/watch?v=Tg7DJzbA\\_gU](https://www.youtube.com/watch?v=Tg7DJzbA_gU)
11. <https://www.youtube.com/watch?v=6DtpLZ08Vml>
12. <https://www.youtube.com/watch?v=n77OH16wztk>
13. [https://www.youtube.com/watch?v=zzZbXR\\_m0vE](https://www.youtube.com/watch?v=zzZbXR_m0vE)
14. <https://www.youtube.com/watch?v=iIGAmyZr4Y>
15. [https://www.youtube.com/watch?v=\\_i7nZg\\_qgSk](https://www.youtube.com/watch?v=_i7nZg_qgSk)



## Detailed description of ECTS credits awarded - part B

**48SJ-AIC**

**ECTS: 3.00**

**CYCLE: 2023L**

### Anesthesiology and Intensive Care

The number of ECTS credits awarded consists of:

1. Contact hours with the academic teacher:

- participation in: Lecture	5.0 h
- participation in: Seminar	10.0 h
- participation in: Classes	45.0 h
- consultation	5.0
	Total: 65.0 h.

2. Independent work of a student:

student's independent work	10.00 h
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Total: 10.0 h

contact hours + independent work of a student Total: 75.0 h

1 ECTS credit = 25-30 h of an average student's work, number of ECTS credit = 75.0 h : 25.0 h/ECTS = 3.00 ECTS on average: 3.0 ECTS

- including the number of ECTS credits for contact hours with the direct participation of an academic teacher: 0,00 ECTS points,

- including the number of ECTS credits for hours of independent work of a student: