

1.	Subject	ANESTHESIOLOGY WITH REANIMATOLOGY AND PAIN THERAPYRADIOLOGY		
2.	Code	OM 513		
3.	Study Program	General Medicine		
4.	Institution (Unit, Institute, Chair, Department)	Ss Cyril and Methodius University, Medical Faculty, Department of Anatomy		
5.	Degree of education (first or second cycle)	Integrated 6-year study		
6.	Study year/semester	Fifth - V Nine - IX	7.Number of credits	2
8.	Responsible teacher	The head of the department Prof. dr. Mirjana Shosholcheva * teaching is performed by all members of Department of Anesthesiology with resuscitation		
9.	Preconditions	Fulfilled condition for VII semester		
10.	<p>Course objectives (competencies): The student to acquire basic knowledge of anesthesiology (types of anesthesia and effect of anesthetics on the body, anesthesiological examination, preparation for anesthesia, peroperative monitoring and peroperative management of the patient in anesthesia, general and local anesthetics, anesthesiology, ophthalmology , types of postesthesiological complications and their solution) Стп Resuscitation as a science and its practical application in medical practice (elements of basic life support and advanced life support and methods (electric shock, anaphylaxis, drowning, trauma, etc.) ■ Basics of intensive treatment (emergency procedures in comatose patients, acute respiratory failure, electrolyte imbalance and clinical manifestations of various types of shock conditions and their therapy) .Basic knowledge of treating acute and chronic pain. Extensive knowledge of how to treat pain when it is the primary symptom, especially the treatment of painful syndrome.</p>			

	<p>Pain assessment skills, various pain gradation scales, special treatment of various types of pain and proper use of analgesics in pain management within general medicine</p> <ul style="list-style-type: none"> ■ To master the skills of: Revival, basic and advanced Oxygen therapy ■ Resuscitation of the circular volume ■ Artificial alimony . Transportation of the critically ill
11.	<p>Course content:</p> <p>Theoretical teaching:</p> <p>Anesthesiology</p> <ul style="list-style-type: none"> • Introduction to the subject • pre-anesthesiological examination of a patient for anesthesia / surgery • Types of anesthesia, drugs under anesthesia • Perioperative monitoring and monitoring (basic and extended) • Care for the sick in the post-anesthesia period • Resuscitation: <ul style="list-style-type: none"> • SBMO, concardiopulmonary resuscitation (SB) approach - AVS, basic life support, DEF - drug treatment of CA - (ECG manifestations in CA - defibrillation) • Resuscitation of accidental conditions: drowning, fatal electric shock. • Brain death, artificial ventilation • Definitions and types of shock - clinic and therapy • Inpatient treatment with infusion fluids, plasma substitutes, blood transfusions and blood derivatives (bleeding and water-salt imbalance in adults and children) • First resuscitation of a comatose patient of unknown nature, resuscitation of acute respiratory failure, acute neuromuscular failure, status epilepticus, status asthmaticus <p>Pain therapy:</p> <ul style="list-style-type: none"> • Pain, clinical implications, types of segmental pain blocking • Pain evaluation techniques, determination of pain therapy regimen, acute pain treatment strategy, types of analgesics for systemic analgesia • Back pain - the most common types of pain in medical practice, using regional analgesia for the treatment of acute and chronic pain, techniques for treating chronic pain • Blocks - method of application, palliative care and pain <p>Practical classes:</p> <ul style="list-style-type: none"> • Anesthesiological examination (classification according to ASA) • Anesthesia machine, practice - operating room • Regional anesthesia - practice • Phantom training - mannequin - artificial respiration, heart massage • Drug application, exercise (i.e., IV infusion therapy) • Intensive care exercises - critically ill, resuscitation of a shocked patient, intubation of a sick person, model training • Convenient use of a defibrillator • Blood transfusion

	<ul style="list-style-type: none"> • Techniques for treating acute and chronic pain (stay in a pain center) 			
12.	<p>Learning methods: Interactive classes, seminars, exercises (practical training and acquisition skills), discussion and consultation with teaching providers</p>			<p>Learning methods: Interactive classes, seminars, exercises (practical training and acquisition skills), discussion and consultation with teaching providers</p>
13.	Total available time:		60 classes	
14.	Organization of the course		40 classes - theoretical course, practical course, seminars 20 classes - home individual learning	
15.	Forms of teaching activities	15.1.	Theoretical course	20 classes
		15.2.	Exercises	18 classes

			(laboratory, 18 hours 2 seminars clinical), seminars, teamwork	2 seminars
16.	Other forms of activities	16.1.	Practice	classes
		16.2.	Individual tasks	classes
		16.3.	Individual (home) learning	20 classes
17.	Method of grading points			
	17.1	Tests	max. 35 Continuous check points 1 written test: covers the foreseen areas: anesthesia, resuscitation, shock and pain therapy	min.- 21 -
		Final exam:	40 Oral part (integrative) 3 questions that ask the integrative knowledge that is important for understanding the whole of the subject areas and medical practice Practical part (according to the skills catalog) (for 10 = 38-40 points, for 9 = 35-37 points for 8 = 31-34 points, for 7 = 28-30 points, for 6 = 24-27 points)	min.-max. points 24 -
	17.2	Seminar paper/project (oral/written presentation)	Seminar paper	Min-max points 2 - 4
	17.3	Active participation	Theoretical course Practical course	min – max 1-5 12-16

		<p>*attendance of theoretical classes</p> <p>51% - 60% - 1 point</p> <p>61% - 70% - 2 points</p> <p>71% - 80% - 3 points</p> <p>81% - 90% - 4 points</p> <p>91% -100% - 5 points</p> <p>** practical classes (12 exercises): attendance 2 point, activity 2 point</p>												
18.	Grading criteria (points / grade)	<table border="1"> <tr> <td>up to 59 points</td> <td>5 (five) F</td> </tr> <tr> <td>from 60 to 68 points</td> <td>6 (six) E</td> </tr> <tr> <td>from 69 to 76 points</td> <td>7 (seven) D</td> </tr> <tr> <td>from 77 to 84 points</td> <td>8 (eight) C</td> </tr> <tr> <td>from 85 to 92 points</td> <td>9 (nine) B</td> </tr> <tr> <td>from 93 to 100 points</td> <td>10 (ten) A</td> </tr> </table>	up to 59 points	5 (five) F	from 60 to 68 points	6 (six) E	from 69 to 76 points	7 (seven) D	from 77 to 84 points	8 (eight) C	from 85 to 92 points	9 (nine) B	from 93 to 100 points	10 (ten) A
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19.	Requirement for signature and taking the final exam	<p>To get a signature the student needs to attend theoretical, practical classes and seminars and earn minimum points</p> <p>To enter the final exam, the student must pass the required continuous checks or earn at least 30% of the total number of points provided for continuous checks. the exam session first takes the failed continuous checks and then proceeds to final exam.</p> <p>The grade for the course is formed according to the table of grades, based on the sum of the points from all activities, the continuous checks and the final exam.</p>												
20.	Language of instruction	Macedonian												
21.	Method of monitoring the quality of teaching process	Student anonymous evaluation of the subject and the teachers and associates participating in teaching performance.												

22.	Textbooks				
22.1.	Required reading				
	No.	Author	Title	Publisher	Year
	1	Edward Morgan, Majid Michael Michael Murray	Clinical anesthesiology	Magor Project of the Government of the Republic of Macedonia textbooks)	2011
	2	Marija soljakova and assistents.	Anesthesiology and resuscitation	Biography	2007
	3	Vladimir Andonov	Heart, lungs revival	Culture	2004
22.2	Additional literature				
	No	Author	Ttitle	Publisher	Year
	1.	Zorka - Nikolova Todorova, Biljana Kuzmanovska, Albert Leshi	Mechanical ventilation	Educational work	2011
	Mirjana Shosholcheva	Neuromuscular block	Medical	2012	

			Faculty - UKIM	
	Biljana Shirgovska	Hypotensive anesthesia	Medical Faculty - UKIM	2012