

<b>GENERAL INFORMATION</b>		
Course name	<b>Opioids in Clinical Practice</b>	
Course director	<b>Assoc. Prof. Ivan Radoš, MD, PhD</b>	
Assistants		
Study program	<b>Integrated undergraduate and graduate university study program Medical Studies in German</b>	
Course status	Elective	
Year of study, semester	5 <sup>th</sup> year, 10 <sup>th</sup> semester	
Credits allocated and form of instruction	ECTS student workload	<b>1</b>
	Number of teaching hours (L+S+E)	<b>15 (5+5+5)</b>
<b>COURSE DESCRIPTION</b>		
<b>Course objectives</b>		
Obtaining knowledge about pharmacodynamics and pharmacokinetics of opioids, the use of opioids in practice, clinical indications for the use of opioids and clinical guidelines and protocols for analgesia.		
<b>Course requirements</b>		
There are no specific requirements for this course except those defined in the study program curriculum.		
<b>Learning outcomes at the Programme level</b>		
<b>1.1., 1.2., 2.1., 3.1., 3.4., 4.1., 4.2.</b>		
<b>Expected learning outcomes (5-10 learning outcomes)</b>		
After passing the Transfusion medicine exam, the student will be able to interpret and draw conclusions related to the acquired knowledge in the field of: <ol style="list-style-type: none"> <li>1. Define opioids</li> <li>2. Indications for the use of opioids, effects and side effects of opioids, pharmacokinetics and pharmacodynamics of opioids</li> <li>3. Types of opioids, routes and techniques of administration</li> <li>4. Analgesia protocol</li> <li>5. Ethics in research and use of opioids</li> <li>6. Opioid abuse</li> </ol>		
<b>Course content</b>		
<p>What defines opioids? Historical overview. Morphine derivatives, define opioids, examples of opioid and non-opioid treatment. Overview of opioids in clinical use: indications, effects of opioid therapy, side effects of opioids, complications of opioid administration, opioid antagonists. New opioids and systems for their administration. Overview of alternative routes of opioid administration: transdermal therapeutic systems, continuous administration via PCA – indications, contraindications and side effects in the administration of opioids by alternative routes. Equianalgesic effect: define equianalgesic effect and comparison of doses of parenterally and perorally administered drugs, comparison of equianalgesic doses of different opioids. Pharmacokinetics and pharmacodynamics. Differences in pharmacodynamics and pharmacokinetics between peroral and parenteral administration of opioids. Transplacental transfer of opioids. Assessment of opioid effect using dynamic rating scales.</p> <p>Switching from non-opioid to opioid therapy and vice versa. Reasons for switching from non-opioid therapy to opioid therapy. Calculation of the required dose of the drug. How to get back? Withdrawal syndrome. Analgesia protocol. Methods of administration of opioids in special clinical situations: Administration of opioids at home. Opioids for cancer pain. Administration of opioids in children. Opioids and the elderly. Ethics in the administration and research of opioids. Informed consent. Common problems in opioid research studies. Additional analgesia.</p>		

Opioid effect assessment: patient's attitude towards treatment success. The attitude of doctors towards opioid treatment. Addiction problem as a side effect of medical treatment. Opioid abuse: non-medical use of opioids, analysis of Canadian National Statistics, opioid preparations as addictive agents, addiction in pregnant women and newborns, organization of treatment and taking care of addicts.

<b>Form of instruction</b>	<input checked="" type="checkbox"/> lectures	and	<input type="checkbox"/> individual assignments
	<input checked="" type="checkbox"/> seminars workshops		<input type="checkbox"/> multimedia and Internet
	<input checked="" type="checkbox"/> exercises		<input type="checkbox"/> laboratory
	<input type="checkbox"/> distance learning		<input type="checkbox"/> mentoring activities
	<input type="checkbox"/> field course		<input type="checkbox"/> other

**Student obligations**

Come to class prepared by studying the recommended literature for each unit and actively participate in all forms of instruction. The student must participate in at least 70% of classes to pass the course.

**Monitoring student learning**

Attendance	x	Active participation	x	Seminar paper		Experimental work	
Written exam	x	Oral exam	x	Essay		Research	
Project		Continuous assessment		Paper		Practical work	
Portfolio							

**Assessment and evaluation of students during class and on the final exam**

Students' performance will be evaluated during class and on the final exam. Students are evaluated numerically and descriptively (insufficient (1), sufficient (2), good (3), very good (4), excellent (5)). During classes, a student can earn a maximum of 100 points. Students can earn a maximum of 20 points during classes through different types of activities. On the final exam, students can earn a maximum of 80 points. The final grade represents the sum of the points earned during classes and on the final exam.

**Mandatory reading**

1. Bause H, Kochs E, Scholz J, Schulte am Esch J, Standl T. Anästhesie, Intensivmedizin, Notfallmedizin, Schmerztherapie - Duale Reihe. Thieme; 2011

**Additional reading**

**The number of copies of mandatory reading in proportion to the number of students currently taking this course**

<i>Title</i>	<i>Number of copies</i>	<i>Number of students</i>
Bause H, Kochs E, Scholz J, Schulte am Esch J, Standl T. Anästhesie, Intensivmedizin, Notfallmedizin, Schmerztherapie - Duale Reihe. Thieme; 2011	A purchased license for online textbooks shall be used <a href="https://bfdproxy48.bfd-online.de/login.htm?back=http%3a%2f%2fpartner.bfd-online.info.bfdproxy48.bfd-online.de%2fameos%2fbfdAboGateway%3fabold%3d264117">https://bfdproxy48.bfd-online.de/login.htm?back=http%3a%2f%2fpartner.bfd-online.info.bfdproxy48.bfd-online.de%2fameos%2fbfdAboGateway%3fabold%3d264117</a>	
	Access will be granted to all students enrolled in the study program	

**Quality monitoring methods ensuring the acquisition of knowledge upon completion, skills and competences**

The quality of course performance is monitored through an anonymous student survey on the quality of the organization and conduction of classes, the course content and the work of professors. The usefulness of the lectures from the students' perspective, the curriculum content, the professor preparedness, the clarity of the presentation, the amount of new content

and the quality of the presentation are evaluated. The curriculum and its execution are administratively compared. The participation of students in lectures and exercises, as well as the excuses for missing classes, are controlled and analyzed.