

UNIVERSITY OF ZAGREB SCHOOL OF MEDICINE

## Plan of the course

# **Anesthesiology and Reanimatology**

Academic year **2016/2017**

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izv. prof. dr. sc. Dinko Tonković

## I. COURSE AIMS

- To give the student fundamental knowledge of anesthesiology with understanding of preoperative examination, types of anesthesia, general and local anesthetics, muscle relaxation and postoperative recovery
- To give the students basic and advanced knowledge of resuscitation
- To give the student basic knowledge of emergency and intensive care medicine
- To give the student basic knowledge of acute and chronic pain management

## II. COURSE STRUCTURE

### Course hours:

Lectures: 14

Seminar: 19

Special clinical practicals: 27

**Total hours: 60**

## III. PLAN OF THE COURSE AND COURSE SCHEDULE

### BLOCKS OF THE COURSE

Number of blocks: 1

Block number	Start	End
1.	27.2.2017	10.3.2017

### BLOCKS OF THE COURSE

Number of blocks: 1

Block number	Start	End
1.	27.2.2017	10.3.2017

### BLOCKS OF THE COURSE SCHEME

Block 1

Date	Time	Group	Course hours type	Theme	Teaching staff
Monday 6.2.2017.	08:15-09:00; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 9	Special clinical practicals	Introduction to anesthesia	izv. prof. dr. sc. Dinko Tonković, dr. sc. Tajana Zah Bogović, doc. dr. sc. Daniela Bandić Pavlović, doc. dr. sc. Ante Sekulić, Eleonora Goluža, dr. med., Mirjana Mirić, dr. med., doc. dr. sc. Višnja Ivančan, dr. sc. Robert Baronica, Renata Curić Radivojević, dr. med.

Date	Time	Group	Course hours type	Theme	Teaching staff
Tuesday 7.2.2017.	08:15-09:00; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 9	Special clinical practicals	Introduction to anesthesia	izv. prof. dr. sc. Dinko Tonković, dr. sc. Tajana Zah Bogović, doc. dr. sc. Daniela Bandić Pavlović, doc. dr. sc. Ante Sekulić, Eleonora Goluža, dr. med., Mirjana Mirić, dr. med., doc. dr. sc. Višnja Ivančan, dr. sc. Robert Baronica, Renata Curić Radivojević, dr. med.
Wednesday 8.2.2017.	08:15-09:00; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 9	Special clinical practicals	Introduction to anesthesia	izv. prof. dr. sc. Dinko Tonković, dr. sc. Tajana Zah Bogović, doc. dr. sc. Daniela Bandić Pavlović, doc. dr. sc. Ante Sekulić, Eleonora Goluža, dr. med., Mirjana Mirić, dr. med., doc. dr. sc. Višnja Ivančan, dr. sc. Robert Baronica, Renata Curić Radivojević, dr. med.
Thursday 9.2.2017.	08:15-09:00; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 9	Special clinical practicals	Introduction to anesthesia	izv. prof. dr. sc. Dinko Tonković, dr. sc. Tajana Zah Bogović, doc. dr. sc. Daniela Bandić Pavlović, doc. dr. sc. Ante Sekulić, Eleonora Goluža, dr. med., Mirjana Mirić, dr. med., doc. dr. sc. Višnja Ivančan, dr. sc. Robert Baronica, Renata Curić Radivojević, dr. med.
Friday 10.2.2017.	08:15-09:00; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 9	Special clinical practicals	Introduction to anesthesia	izv. prof. dr. sc. Dinko Tonković, dr. sc. Tajana Zah Bogović, doc. dr. sc. Daniela Bandić Pavlović, doc. dr. sc. Ante Sekulić, Eleonora Goluža, dr. med., Mirjana Mirić, dr. med., doc. dr. sc. Višnja Ivančan, dr. sc. Robert Baronica, Renata Curić Radivojević, dr. med.

Date	Time	Group	Course hours type	Theme	Teaching staff
Monday 13.2.2017.	08:15-09:00; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 9	Special clinical practicals	Introduction to anesthesia	izv. prof. dr. sc. Dinko Tonković, dr. sc. Tajana Zah Bogović, doc. dr. sc. Daniela Bandić Pavlović, doc. dr. sc. Ante Sekulić, Eleonora Goluža, dr. med., Mirjana Mirić, dr. med., doc. dr. sc. Višnja Ivančan, dr. sc. Robert Baronica, Renata Curić Radivojević, dr. med.
Tuesday 14.2.2017.	08:15-09:00; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 9	Special clinical practicals	Introduction to anesthesia	izv. prof. dr. sc. Dinko Tonković, dr. sc. Tajana Zah Bogović, doc. dr. sc. Daniela Bandić Pavlović, doc. dr. sc. Ante Sekulić, Eleonora Goluža, dr. med., Mirjana Mirić, dr. med., doc. dr. sc. Višnja Ivančan, dr. sc. Robert Baronica, Renata Curić Radivojević, dr. med.
Wednesday 15.2.2017.	08:15-09:00; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 9	Special clinical practicals	Introduction to anesthesia	izv. prof. dr. sc. Dinko Tonković, dr. sc. Tajana Zah Bogović, doc. dr. sc. Daniela Bandić Pavlović, doc. dr. sc. Ante Sekulić, Eleonora Goluža, dr. med., Mirjana Mirić, dr. med., doc. dr. sc. Višnja Ivančan, dr. sc. Robert Baronica, Renata Curić Radivojević, dr. med.
Thursday 16.2.2017.	08:15-09:00; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 9	Special clinical practicals	Introduction to anesthesia	izv. prof. dr. sc. Dinko Tonković, dr. sc. Tajana Zah Bogović, doc. dr. sc. Daniela Bandić Pavlović, doc. dr. sc. Ante Sekulić, Eleonora Goluža, dr. med., Mirjana Mirić, dr. med., doc. dr. sc. Višnja Ivančan, dr. sc. Robert Baronica, Renata Curić Radivojević, dr. med.

Date	Time	Group	Course hours type	Theme	Teaching staff
Friday 17.2.2017.	08:15-09:00; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 9	Special clinical practicals	Introduction to anesthesia	izv. prof. dr. sc. Dinko Tonković, dr. sc. Tajana Zah Bogović, doc. dr. sc. Daniela Bandić Pavlović, doc. dr. sc. Ante Sekulić, Eleonora Goluža, dr. med., Mirjana Mirić, dr. med., doc. dr. sc. Višnja Ivančan, dr. sc. Robert Baronica, Renata Curić Radivojević, dr. med.
Monday 27.2.2017.	08:00-08:45; KBC, edukacijski centar S. Dogan		Lectures	General principles of anesthesiology	izv. prof. dr. sc. Dinko Tonković
	08:45-09:30; KBC, edukacijski centar S. Dogan		Lectures	Types of anesthesia and anesthetic drugs	prof. dr. sc. Ljiljana Popović
	09:30-10:15; KBC, edukacijski centar S. Dogan		Lectures	Anesthesia for special situations and perioperative monitoring	prof. dr. sc. Ljiljana Popović
	10:15-11:00; KBC, edukacijski centar S. Dogan		Seminar	Anesthetic drugs	prof. dr. sc. Ljiljana Popović
	11:30-12:15; KBC, edukacijski centar S. Dogan		Lectures	Acute respiration failure	izv. prof. dr. sc. Dinko Tonković
	12:15-13:00; KBC, edukacijski centar S. Dogan		Seminar	Mechanical ventilation	izv. prof. dr. sc. Dinko Tonković
Tuesday 28.2.2017.	08:00-08:45; KBC, edukacijski centar A. Hahn		Lectures	Life threatening arrhythmia, universal protocols for VF/VT, non VF/VT defibrillation	izv. prof. dr. sc. Dinko Tonković
	08:45-09:30; KBC, edukacijski centar A. Hahn		Seminar	Preoperative evaluation	izv. prof. dr. sc. Dinko Tonković
	09:30-10:15; KBC, edukacijski centar A. Hahn		Seminar	Anesthesia for day case surgery	doc. dr. sc. Daniela Bandić Pavlović
	10:15-11:00; KBC, edukacijski centar A. Hahn		Seminar	Obstetric anesthesiology	doc. dr. sc. Slobodan Mihaljević
	11:30-12:15; KBC, edukacijski centar S. Dogan		Seminar	Sepsis, MOF	izv. prof. dr. sc. Dinko Tonković
	12:15-13:00; KBC, edukacijski centar A. Hahn		Seminar	Pediatric anesthesia	prof. dr. sc. Ljiljana Popović

Date	Time	Group	Course hours type	Theme	Teaching staff
Wednesday 1.3.2017.	08:00-08:45; KBC, edukacijski centar S. Dogan		Lectures	General principles of emergency and Intensive care medicine	izv. prof. dr. sc. Mladen Perić
	08:45-09:30; KBC, edukacijski centar S. Dogan		Lectures	Polytrauma and shock	izv. prof. dr. sc. Mladen Perić
	09:30-11:00; KBC, edukacijski centar S. Dogan		Seminar	Polytrauma	izv. prof. dr. sc. Mladen Perić
	11:30-13:00; KBC, edukacijski centar S. Dogan		Seminar	Temporary support of organ dysfunction	izv. prof. dr. sc. Dinko Tonković
Thursday 2.3.2017.	08:00-08:45; KBC, edukacijski centar S. Dogan		Lectures	General principles of resuscitation	izv. prof. dr. sc. Dinko Tonković
	08:45-09:30; KBC, edukacijski centar S. Dogan		Lectures	Basic life support and advanced life support	izv. prof. dr. sc. Dinko Tonković
	09:30-10:15; KBC, edukacijski centar S. Dogan		Seminar	End of life – donors	doc. dr. sc. Ante Sekulić
	10:15-11:00; KBC, edukacijski centar S. Dogan		Seminar	Nutrition in ICU	izv. prof. dr. sc. Dinko Tonković
	11:30-12:15; KBC, edukacijski centar S. Dogan		Seminar	Infection in ICU	izv. prof. dr. sc. Mladen Perić
	12:15-13:00; KBC, edukacijski centar S. Dogan		Lectures	Monitoring and temporary organ support	izv. prof. dr. sc. Dinko Tonković
Friday 3.3.2017.	08:00-08:45; KBC, Edukacijski istok - 2		Lectures	Neurophysiology of pain	izv. prof. dr. sc. Mladen Perić
	08:45-09:30; KBC, Edukacijski istok - 2		Lectures	Definition of acute and chronic pain	doc. dr. sc. Daniela Bandić Pavlović
	09:45-10:30; KBC, Edukacijski istok - 2		Seminar	Basic principles of acute and chronic pain therapy	dr. sc. Tajana Zah Bogović
	10:45-12:15; KBC, Edukacijski istok - 2		Seminar	Pharmacological therapy of acute and chronic pain	dr. sc. Tajana Zah Bogović
	12:15-13:00; KBC, Edukacijski istok - 2		Seminar	Cancer pain	dr. sc. Tajana Zah Bogović
	13:00-13:45; KBC, Edukacijski istok - 2		Seminar	Perioperative pain management	dr. sc. Tajana Zah Bogović

Date	Time	Group	Course hours type	Theme	Teaching staff
Monday 6.3.2017.	08:30-10:00; KBC, Klinika za anesteziologiju, Sala 1	Group 1-6	Special clinical practicals	Airway management	izv. prof. dr. sc. Dinko Tonković, doc. dr. sc. Ante Sekulić, Mirjana Mirić, dr. med., Renata Curić Radivojević, dr. med., doc. dr. sc. Višnja Ivančan, dr. sc. Robert Baronica, Marinko Vučić
	08:30-10:00; KBSD, Anesteziologija	Group 7	Special clinical practicals	Airway management	doc. dr. sc. Višnja Neseck Adam
	08:30-10:00; KBD, Klinika za anesteziologiju, reanimatologiju i intenzivno liječenje	Group 9	Special clinical practicals	Airway management	Nikola Bradić, V. pred.
	08:30-10:00; KBSM, Zavod za anesteziologiju i reanimatologiju	Group 8	Special clinical practicals	Airway management	Marinko Vučić
	10:00-11:30; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 6	Special clinical practicals	Clinical evaluation of patient in shock	izv. prof. dr. sc. Dinko Tonković, doc. dr. sc. Ante Sekulić, Mirjana Mirić, dr. med., dr. sc. Robert Baronica, Renata Curić Radivojević, dr. med., Marinko Vučić, izv. prof. dr. sc. Mladen Perić
	10:00-11:30; KBSD, Anesteziologija	Group 7	Special clinical practicals	Clinical evaluation of patient in shock	doc. dr. sc. Višnja Neseck Adam
	10:00-11:30; KBSM, Zavod za anesteziologiju i reanimatologiju	Group 8	Special clinical practicals	Clinical evaluation of patient in shock	Marinko Vučić
	10:00-11:30; KBD, Klinika za anesteziologiju, reanimatologiju i intenzivno liječenje	Group 9	Special clinical practicals	Clinical evaluation of patient in shock	Nikola Bradić, V. pred.
	12:00-13:30; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 6	Special clinical practicals	Basic life support	izv. prof. dr. sc. Dinko Tonković, doc. dr. sc. Ante Sekulić, dr. sc. Robert Baronica, Marinko Vučić, Renata Curić Radivojević, dr. med., izv. prof. dr. sc. Mladen Perić
	12:00-13:30; KBSD, Anesteziologija	Group 7	Special clinical practicals	Basic life support	doc. dr. sc. Višnja Neseck Adam
	12:00-13:30; KBSM, Zavod za anesteziologiju i reanimatologiju	Group 8	Special clinical practicals	Basic life support	Marinko Vučić

Date	Time	Group	Course hours type	Theme	Teaching staff
	12:00-13:30; KBD, Klinika za anesteziologiju, reanimatologiju i intenzivno liječenje	Group 9	Special clinical practicals	Basic life support	Nikola Bradić, V. pred.
Tuesday 7.3.2017.	08:30-10:45; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 6	Special clinical practicals	Advanced base support	dr. sc. Tajana Zah Bogović, doc. dr. sc. Daniela Bandić Pavlović, izv. prof. dr. sc. Dinko Tonković, doc. dr. sc. Ante Sekulić, dr. sc. Robert Baronica, Renata Curić Radivojević, dr. med., Mirjana Mirić, dr. med.
	08:30-10:45; KBD, Klinika za anesteziologiju, reanimatologiju i intenzivno liječenje	Group 9	Special clinical practicals	Advanced base support	Nikola Bradić, V. pred.
	08:30-10:45; KBSM, Zavod za anesteziologiju i reanimatologiju	Group 8	Special clinical practicals	Advanced base support	Marinko Vučić
	08:30-10:45; KBSD, Anesteziologija	Group 7	Special clinical practicals	Advanced base support	doc. dr. sc. Višnja Neseck Adam
	10:45-12:15; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 6	Special clinical practicals	Monitoring of vital function	dr. sc. Tajana Zah Bogović, doc. dr. sc. Daniela Bandić Pavlović, izv. prof. dr. sc. Dinko Tonković, Renata Curić Radivojević, dr. med., Mirjana Mirić, dr. med., dr. sc. Robert Baronica, doc. dr. sc. Ante Sekulić
	10:45-12:15; KBSD, Anesteziologija	Group 7	Special clinical practicals	Monitoring of vital function	doc. dr. sc. Višnja Neseck Adam
	10:45-12:15; KBSM, Zavod za anesteziologiju i reanimatologiju	Group 8	Special clinical practicals	Monitoring of vital function	Marinko Vučić
	10:45-12:15; KBD, Klinika za anesteziologiju, reanimatologiju i intenzivno liječenje	Group 9	Special clinical practicals	Monitoring of vital function	Nikola Bradić, V. pred.

Date	Time	Group	Course hours type	Theme	Teaching staff
Wednesday 8.3.2017.	08:30-10:45; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 6	Special clinical practicals	Evaluation of pain	izv. prof. dr. sc. Dinko Tonković, doc. dr. sc. Daniela Bandić Pavlović, dr. sc. Tajana Zah Bogović, dr. sc. Robert Baronica, Mirjana Mirić, dr. med., Renata Curić Radivojević, dr. med., doc. dr. sc. Višnja Ivančan
	08:30-10:45; KBD, Klinika za anesteziologiju, reanimatologiju i intenzivno liječenje	Group 9	Special clinical practicals	Evaluation of pain	Nikola Bradić, V. pred.
	08:30-10:45; KBSM, Zavod za anesteziologiju i reanimatologiju	Group 8	Special clinical practicals	Evaluation of pain	Marinko Vučić
	08:30-10:45; KBSD, Anesteziologija	Group 7	Special clinical practicals	Evaluation of pain	doc. dr. sc. Višnja Neseck Adam
	10:45-13:00; KBC, Klinika za anesteziologiju, Sala 1	Group 1 - 6	Special clinical practicals	Pain therapy	izv. prof. dr. sc. Dinko Tonković, doc. dr. sc. Daniela Bandić Pavlović, dr. sc. Tajana Zah Bogović, Renata Curić Radivojević, dr. med., Mirjana Mirić, dr. med., doc. dr. sc. Ante Sekulić, dr. sc. Robert Baronica
	10:45-13:00; KBD, Klinika za anesteziologiju, reanimatologiju i intenzivno liječenje	Group 9	Special clinical practicals	Pain therapy	Nikola Bradić, V. pred.
	10:45-13:00; KBSM, Zavod za anesteziologiju i reanimatologiju	Group 8	Special clinical practicals	Pain therapy	Marinko Vučić
	10:45-13:00; KBSD, Anesteziologija	Group 7	Special clinical practicals	Pain therapy	doc. dr. sc. Višnja Neseck Adam
Friday 10.3.2017.	12:00-13:30; KBC, Klinika za anesteziologiju, predavaonica	SVI	Exam	Practical colloquium	izv. prof. dr. sc. Dinko Tonković, dr. sc. Tajana Zah Bogović, doc. dr. sc. Daniela Bandić Pavlović
Monday 20.3.2017.	14:00-15:30; KBC, edukacijski centar I. H. Botteri	SVI	Exam	Written exam	izv. prof. dr. sc. Dinko Tonković
Monday 24.4.2017.	14:00-15:30; KBC, edukacijski centar I. H. Botteri	SVI	Exam	Written exam	izv. prof. dr. sc. Dinko Tonković

Date	Time	Group	Course hours type	Theme	Teaching staff
Monday 3.7.2017.	14:00-15:30; KBC, edukacijski centar I. H. Botteri	SVI	Exam	Written exam	izv. prof. dr. sc. Dinko Tonković
Monday 4.9.2017.	14:00-15:30; KBC, edukacijski centar I. H. Botteri	SVI	Exam	Written exam	izv. prof. dr. sc. Dinko Tonković

Classes are going to be held at:

KBC Zagreb, Kišpatićeva 12, Klinika za anesteziologiju, reanimatologiju i intenzivno liječenje“

KB Sveti Duh, Ul. Sveti Duh 66, Klinika za anesteziologiju, reanimatologiju i intenzivno liječenje

KBC Sestre Milosrdnice, Vinogradska cesta 29, Zavod za anesteziologiju, reanimatologiju i intenzivno liječenje

#### **IV. EXAMINATIONS**

**Requirements to take the final exam:** Students need to attend at least 80% of class to get the attendance signature. Also, on the last day of course students need to pass **practical colloquium** (clinical sings of shock, airway management, resuscitation procedures on manikins). After those requirements are met students are allowed to take the final exam which needs to be signed up through studomat.

**The final exam:** written exam (multiple - choice questions, one correct answer) and oral exam.

**1st exam term:** March 20th 2017

**2nd exam term:** April 24th 2017

**3rd exam term:** July 3rd 2017

**4th exam term:** September 4th 2017

#### **V./I. LIST OF LECTURERS AND TEACHING STAFF**

1. izv. prof. dr. sc. Dinko Tonković
2. izv. prof. dr. sc. Mladen Perić
3. doc. dr. sc. Ante Sekulić
4. doc. dr. sc. Slobodan Mihaljević
5. doc. dr. sc. Daniela Bandić Pavlović
6. dr. sc. Tajana Zah Bogović

#### **V./II EXTERNAL ASSOCIATES:**

1. Renata Curić Radivojević, dr. med.
2. dr. sc. Robert Baronica
3. doc. dr. sc. Višnja Neseć Adam
4. Marinko Vučić

5. Nikola Bradić, V. pred.

6. Lana Videc Penavić, dr. med.

#### **V./III UNTENURED LECTURERS:**

1. prof. dr. sc. Ljiljana Popović

2. Eleonora Goluža, dr. med.

3. Mirjana Mirić, dr. med.

4. doc. dr. sc. Višnja Ivančan

#### **VI. LITERATURE**

##### **A. Obligatory**

01. Morgan EG, Mikhail MS, Murray MJ. Clinical Anesthesiology, 5 th ed. Lange medical Books/McGraw Hill medical Publishing Division 2013.

##### **B. Additional**

01. Guidelines 2010 for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. An International Consensus on Science. The American Heart Association in Collaboration With the International Liaison Committee on Resuscitation (ILCOR). Resuscitation on 18 October 2010.