Category	IV (CC1)
Course Title	Anesthesia and Intensive Care Medicine
Eligible Students	grade 4 Related Course
Code	71643002-18

1. **Lead Instructor**

Yukitoshi Niiyama   (Professor, Dept. of Anesthesiology and Intensive Care , 6172, Office Hour: 8:30 - 17:00)

2. **Instructors**

Yukitoshi Niiyama   (Professor, Dept. of Anesthesiology and Intensive Care , 6172, Office Hour: 8:30 - 17:00)

Tetsu Kimura   (Hospital Associate Professor, Division of Medical Security and Patient Safety , 6173, Office Hour: 8:30 - 17:00)

Akira Nemoto   (Assistant Professor, Dept. of Anesthesiology and Intensive Care , 6175, Office Hour: 8:30 - 17:00)

Koji Sato   (Assistant Professor, Dept. of Anesthesiology and Intensive Care , 6175, Office Hour: 8:30 - 17:00)

Natsuko Yamamoto   (Assistant Professor, Dept. of Anesthesiology and Intensive Care , 6175, Office Hour: 8:30 - 17:00)

Yuta Horikoshi   (Assistant Professor, Dept. of Emergency and Intensive care , 6175, Office Hour: 8:30 - 17:00)

Sahoko Kodama   (Assistant Professor, Dept. of Anesthesiology and Intensive Care , 6175, Office Hour: 8:30 - 17:00)

Ayano Sekigawa   (Medical Doctor, Dept. of Anesthesiology and Intensive Care , 6175, Office Hour: 8:30 - 17:00)

Atsushi Unuma   (Medical Doctor, Dept. of Anesthesiology and Intensive Care , 6175, Office Hour: 8:30 - 17:00)

3. **Course Description Outline(Course Objectives)**

1. Aim

This course provides opportunities to Learn about the medical abilities in the anesthesiology field that doctors in any field will need in the future through medical treatment for patients undergoing general anesthesia and local anesthesia as a member of the team, and to acquire an image of anesthesia work.

2. Learning goals

The goals of this course are to learn and acquire

1) Symptoms / pathological conditions Clinical reasoning

(1) Hypertension / hypotension, (2) Arrhythmia, (3) Hypoglycemia, (4) Hypercarbonemia, (5) Shock, (6) Cardiac arrest, (7) Acidosis / alkalosis, (8) Electrolyte imbalance, (9) Hypertension / hypoglycemia, (10) Difficult airway, (11) Postoperative pain (12) Acute and chronic pain

2) Basic clinical procedures

(1) Repositioning and transfer are possible, (2) Skin disinfection is possible, (3) Observe and assist the insertion of the peripheral venous catheter, (4) Observe and assist the insertion of the arterial catheter, (5) Arterial blood gas analysis can be performed, (6) Observe and assist the insertion of the central venous catheter, (7) insertion and remove the gastric tube, (8) Intravenous administration, (9) Observe and assist general anesthesia, local anesthesia, and blood transfusion (10) Assist to describe the medical records (anesthetic records) (11) Observe various medical certificates, examination documents, and certificates and assist

3) Laboratory procedures (1) Standard operating room vital sign monitors (electrocardiogram, non-invasive arterial pressure, percutaneous oxygen saturation, capnogram, bispectral index, core temperature, etc.) can be worn. (2) Arterial blood gas analysis can be performed.

4) Surgical procedure

(1) Aseptic technique can be performed. (2) You can wash your hands for the procedure. (3) Can perform gown techniques in the operating room. (4) Observe and assist in surgery, preoperative, intraoperative, and postoperative management. (5) Visit and assist nerve blocks.

5) Life-saving measures

(1) Physical signs and vital signs can be used to determine that the situation is highly urgent. (2) Basic life support can be implemented. (3) Participate to the extent possible in the initial response of patients with high urgency, including advanced life support.

6) Anesthesiology practice

(1) Learn clinical reasoning and response to various symptoms and pathological conditions encountered during anesthesia management (above 2. Learning objectives-1)) through the medical treatment of a supervising doctor. (2) Participate in actual anesthesia management to the extent possible under the responsibility of the instructor.

7) Simulation education

(1) Improve clinical skills by repeatedly practicing using a high-performance anesthesia simulator (2) Acquire situational judgment and decision-making ability through his training using scenarios. (3) Experience venous line securing using a simulator, Anatomical diagnosis by echography. (4) Improve self-reflection ability by looking back.

8) Presentation

Prepare and present a presentation on a given anesthesia-related topic.

9) 1-sentence

Describe the day's learnings in a single sentence (40-60 words).

10) Competency education

(1) Learn the pride (ethics, medical behavior) as a doctor by acting as a spokesperson for the patient in an environment where the patient's consciousness of anesthesia is lost and communication cannot be achieved. (2) Understand what to do when anesthesia-related complications occur based on the concept of medical safety. (3) Learn professionalism and team medical care while working in various occupations such as surgeons, nurses, and clinical engineers. (4) Learn recent evidence and guidelines for anesthesia and perioperative management.

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9) 1-sentence
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4. **Textbook/Reference Books**

TEXT　　　　　4
NEW　　　3
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Miller's Anesthesia 9th edition　Elsevier

5. **Assessment**

Attitude, oral examination, OSCE, presentation, report (impression), 1-sentence, attendance, etc.

OSCE　　　　　　　　　　　　　1-sentence

6. **Out of Class Study/Message**

07:45 (Monday), 08:00 (Tuesday, Wednesday, Thursday, Friday), Conference Room in the Operating Room

1. Please study the matters immediately before the practical training in the clinical clerkship guide of our university.
2. Please fill in the experience procedure and notebook.
3. Please participate Pain clinic outpatient training (Wednesday, Thursday)
4. Training content and schedule are subject to change. Be sure to contact us in advance.

07:45,   08:00

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Schedule		Contents of Class
1	Mon [07:45 - 17:00] Orientation Surgical anesthesia case training	07:45 - 08:45 Conference 08:45 - 10:00 Surgical anesthesia case training 10:00 - 12:00 Orientation 12:00 - 13:00 Lunch 13:00 - 17:00 Surgical anesthesia case training, collect information and prepare for the next day's surgical patients
Subtitle		
Instructor	Yukitoshi Niiyama, Yuta Horikoshi, etc.	07:45 - 08:45 08:45 - 10:00 10:00 - 12:00 12:00 - 13:00 13:00 - 17:00
2	Tue [08:00 - 17:00] Surgical anesthesia case training Practical skill	08:00 - 08:45 Conference 08:45 - 12:00 Surgical anesthesia case training 12:00 - 13:00 Lunch 13:00 - 14:30 Practical skill 14:30 - 17:00 Surgical anesthesia case training, collect information and prepare for the next day's surgical patients
Subtitle		
Instructor	Yukitoshi Niiyama, Koji Sato, etc.	08:00 - 08:45 08:45 - 12:00 12:00 - 13:00 13:00 - 14:30 14:30 - 17:00
3	Wed [08:00 - 17:00] Surgical anesthesia case training (Pain clinic outpatient training)	08:00 - 08:45 Conference 08:45 - 12:00 Surgical anesthesia case training (09:00 - 12:00 Pain clinic outpatient training) 12:00 - 13:00 Lunch 13:00 - 17:00 Surgical anesthesia case training, collect information and prepare for the next day's surgical patients
Subtitle		
Instructor	Akira Nemoto, Natsuko Yamamoto, etc.	08:00 - 08:45 08:45 - 12:00 09:00 - 12:00 12:00 - 13:00 13:00 - 17:00
4	Thu [08:00 - 17:00] Surgical anesthesia case training (Pain clinic outpatient training)	08:00-08:45 Conference 08:45 - 11:00 Surgical anesthesia case training (09:00 - 12:00 Pain clinic outpatient training) 12:00 - 13:00 Lunch 13:00 - 17:00 Surgical anesthesia case training, preoperative evaluation, anesthesia planning, and preparation of surgical patients
Subtitle		
Instructor	Tetsu Kimura, Akira Nemoto, etc.	08:00 - 08:45 08:45 - 11:00 09:00 - 12:00 12:00 - 13:00 13:00 - 17:00
5	Fri [08:00 - 12:00] Surgical anesthesia case training	08:00 - 08:45 Conference 08:45 - 12:00 Surgical anesthesia case training, preoperative evaluation, anesthesia planning, and preparation of surgical patients
Subtitle		
Instructor	Yuta Horikoshi, Sahoko Kodama, etc.	08:00 - 08:45 08:45 - 12:00

Schedule	Contents of Class
6 Mon [07:45 - 17:00] Surgical anesthesia case training Subtitle Instructor Yukitoshi Niiyama, Koji Sato, etc.	07:45 - 08:45 Conference 08:45 - 12:00 Surgical anesthesia case training 12:00 - 13:00 Lunch 13:00 - 17:00 Surgical anesthesia case training, preoperative evaluation, anesthesia planning, and preparation of surgical patients 07:45 - 08:45 08:45 - 12:00 12:00 - 13:00 13:00 - 17:00
7 Tue [08:00 - 17:00] Surgical anesthesia case training Anesthesia simulator training Subtitle OSCE Instructor Ayano Sekigawa, Atsushi Unuma, etc.	08:00 - 08:45 Conference 08:45 - 09:30 Surgical anesthesia case training 09:30 - 12:00 Anesthesia simulator training (OSCE) 12:00 - 13:00 Lunch 13:00 - 17:00 Surgical anesthesia case training, preoperative evaluation, anesthesia planning, and preparation of surgical patients 08:00 - 08:45 08:45 – 09:30 09:30 - 12:00 OSCE 12:00 - 13:00 13:00 - 17:00
8 Wed [08:00 - 17:00] Surgical anesthesia case training (Pain clinic outpatient training) Subtitle Instructor Akira Nemoto, Natsuko Yamamoto, etc.	08:00 - 08:45 Conference 08:45 - 12:00 Surgical anesthesia case training 09:00 - 12:00 Pain clinic outpatient training 12:00 - 13:00 Lunch 13:00 - 17:00 Surgical anesthesia case training, preoperative evaluation, anesthesia planning, and preparation of surgical patients 08:00 - 08:45 08:45 - 12:00 09:00 - 12:00 12:00 - 13:00 13:00 - 17:00
9 Thu [08:00 - 17:00] Surgical anesthesia case training (Pain clinic outpatient training) Subtitle Instructor Tetsu Kimura, Akira Nemoto, etc.	08:00 - 08:45 Conference 08:45 - 11:00 Surgical anesthesia case training (09:00 - 12:00 Pain clinic outpatient training) 12:00 - 13:00 Lunch 13:00 - 17:00 Surgical anesthesia case training, preoperative evaluation / anesthesia planning / preparation of surgical patients 08:00 - 08:45 08:45 - 11:00 09:00 - 12:00 12:00 - 13:00 13:00 - 17:00
10 Fri [08:00 - 12:00] Summary Presentation Subtitle Instructor Yukitoshi Niiyama, Yuta Horikoshi, etc.	08:00 - 08:45 Conference (case presentation) 08:45 - 10:00 Surgical anesthesia training 10:00 - 12:00 Summary, presentation of learning content, submission of 1-sentence and impressions 08:00 - 08:45 08:45 - 10:00 10:00 - 12:00 1-sentence