

## 2026 Akita University Faculty of Medicine Syllabus

<b>Category</b>	: 臨床医学 IV (CC1)
<b>Course Title</b>	: Clinical Clerkship I Cardiovascular surgery
<b>Eligible Students</b>	: grade 4 Related Course
<b>Code</b>	: 71643002-09

### 1. Lead Instructor

Hiroyuki Nakajima (Professor, Cardiovascular surgery, 6135, Office Hour: 8:00-17:30)

### 2. Instructors

Hiroyuki Nakajima (Professor, Cardiovascular surgery, 6135, Office Hour: 8:00-17:30)

Daichi Takagi (Lecturer, Cardiovascular surgery, 6135, Office Hour: 8:00-17:30)

Genbu Yamaura (Assistant Professor, Cardiovascular surgery, 6135, Office Hour: 8:00-17:30)

Kentaro Kiryu (Assistant Professor, Cardiovascular surgery, 6135, Office Hour: 8:00-17:30)

Takeshi Arai (Medical Doctor, Cardiovascular surgery, 6135, Office Hour: 8:15-17:30)

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

#### 1. Outline and aims

As members of our teams, students will acquire practical skills in clinical reasoning, differential diagnosis, and decision making for examination and treatment of syndromes and pathological conditions in the field of surgery, especially cardiovascular surgery, which are necessary for future physicians in any field.

In addition, students will learn about medical behavioral science, medical ethics, medical safety, medical law (medical system), and EBM.

#### 2. Outline

- Students should work actively as members of a medical team led by a supervisor, and acquire basic knowledge and skills in cardiovascular surgery.

- Students will be trained to collect information, identify and interpret problems (clinical reasoning), and formulate solutions (diagnosis and treatment).

##### (1) clinical clerkship in a ward

Students will be assigned to a medical team for one week and is responsible for one postoperative patient in a ward (mainly in intensive care units) under the supervision of a medical advisor.

Under the guidance of the supervising physician, the students make daily rounds of the patients, and learn basic medical treatment through identifying problems through medical interviews and physical examinations, clinical reasoning, and making medical records.

In particular, students will learn the dynamics of respiration and circulation in the acute phase after cardiovascular surgery by treating postoperative patients.

##### (2) Participation in outpatient care, various examinations, and surgical treatments

Each practice group will be in charge of one surgical patient. Students will learn preoperative examinations, surgical indications and procedures, surgical observation, and postoperative management as a member of a medical team.

#### 3. Learning goals

In addition to the above outlines and aims, the following is a list of syndromes, pathologies, and various procedures to be experienced in this department.

##### 1) Symptoms and pathological conditions. Clinical reasoning

(1) Postoperative circulatory and postoperative respiratory failures, (2) Shock, (3) Edema, (4) Pleural effusion, (5) Chest pain, (6) Dyspnea, (7) Palpitation

2) Basic clinical procedures

- (1) Making medical records (medical charts)
  - (2) Understanding the ICU format and use it in practice
  - (3) Changing the patient position and patient transfer
- 3) Examination techniques

- (1) Performing a 12-lead electrocardiography
- (2) Examining blood gas analysis

4) Preoperative review and surgical techniques

- (1) Learning echocardiography and computed tomography (chest, abdomen and pelvis) through a presentation of preoperative case studies.
- (2) Determining indications for surgery based on the guidelines.
- (2) Observing operations (also as an assistant) and perioperative managements.

This course is performed by faculties with actual practical experiences.

**4. Textbook/Reference Books**

Robert M Bojar. Manual of perioperative care in adult cardiac surgery, 5th Ed. Wiley-Blackwell  
Japan Circulation Society (JCS) Guidelines

**5. Assessment**

Evaluating the student's ability understanding of the knowledge regarding diseases and surgical procedures through

- 1) a student's presentation ability in a preoperative conference,
- 2) daily checking of patient's examinations and medical records,
- 3) discussion at the course closing.

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

In this course, students, if they wish, will be able to join postoperative management with on-duty doctors as an out of class study.

Students should record a medical chart daily and improve their records for approval through discussion and feedback under the attending doctor.

心臓血管外科学 臨床実習

Schedule		Contents of Class
1	Mon [ 8:00-17:00 ] Subtitle Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference (Conference room of cardiovascular surgery department ) 09:00 Orientation 10:00 ~ Observing surgery, Patient examination, Making medical records
2	Tue [ 8:30-17:00 ] Subtitle Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference 10:00 ~ Patient examination, Making medical records 13:00 ~ 16:00 Preparing for a presentation about a preoperative patient. 16:00 Evening conference
3	Wed [ 8:30-17:00 ] Subtitle Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference 10:00 ~ Patient examination, Making medical records 13:00 ~ 17:00 Preparing for a presentation about a preoperative patient.
4	Thu [ 8:15-17:00 ] Subtitle Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference : a presentation about a preoperative patient. 10:00 ~ Observing surgery, Patient examination, Making medical records
5	Fri [ 8:00-17:00 ] Subtitle Clinical clerkship cardiovascular surgery Instructor Daichi Takagi, Takayuki Kadohama, Fuminobu Tanaka	08:00 Morning conference 09:00 Closing 10:00 ~ Observing surgery, Patient examination, Making medical records 14:20 ~ Comprehensive lectures on medicine and health care