Elective Courses

Chiba University School of Medicine
Chiba University Hospital

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GASTROENTEROLOGY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Student must have completed an M3 clerkship.

Purpose

To provide students an excellent experience of the contemporary gastroenterological practice in Japan, including endoscopic examination and treatment (gastrointestinal tract , biliary and pancreas), treatment of hepatitis, interventional procedure of hepatocellular carcinoma, and related research.

Competencies

Students will be expected to gain a better understanding of gastroenterological diseases and patient care.

Instructional features

The students will participate in the care of gastroenterology patients both in the hospital and in the clinic setting. They will participate in the interventional procedure and post-procedure care. They will be assigned to selected inpatients and have a presentation on their patients at conferences. The course allows the student to function as a junior house officer.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program director: O. Yokosuka yokosukao@faculty.chiba-u.jp

Requirements

Night Call: No Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 4
Laboratory: 2
Outpatient 4
Inpatient: 30 Total hours/week 40

Key words

DIABETES, ENDOCRINOLOGY AND METABOLISM

	Number of students accepted: 1	Length: 4 Weeks

Prerequisite

Students must have completed M3 Medicine Core Clerkship.

Purpose

This elective provides opportunity for students to learn the common and the rare endocrine and metabolic disorders.

Competencies

- To learn managements of type 1 and type 2 diabetes, and complications of diabetes
- To learn to treat dyslipidemia and metabolic syndrome
- To learn to narrow the differential diagnosis of adrenal tumors and pituitary tumors
- To learn to diagnose disorders of fluid and electrolyte metabolism
- To learn to manage hyperthyroidism, hypothyroidism, and the thyroid nodules
- To expand knowledge about Werner syndrome (also known as “Adult progeria”), a very rare, autosomal recessive disorder

Instructional features

The student participates in hospital and outpatient clinic, patient evaluation, ward rounds, conferences, journal clubs, seminars in close association with, and guided by the attendings, residents, graduate students, and faculties in diabetes, endocrinology and metabolism. She/he is given responsibility in evaluating and managing patients, literature review, and presenting material at the conference and journal clubs. Optional programs include adrenal venous sampling, ultrasound examination of the thyroid and the carotid artery. The research areas available include basic science research in the areas of diabetes, lipid metabolisms, bone biology, tumors (especially tumor suppressor gene *p53*), and geriatrics.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Koutaro Yokote, M.D., Ph.D. (kyokote@faculty.chiba-u.jp)
Administrator: Tomoaki Tanaka, M.D., Ph.D. (tomoaki@restaff.chiba-u.jp); PHS: 72080
Phone: 043-226-2092 (department office)

Requirements

Night Call: No	Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty Contact: 5	Outpatient: 10
Laboratory: 0-2	Inpatient: 20
Independent Study: 3-5	Total Hours /Week: 40

Key words

Diabetes, Endocrinology, Geriatric Medicine

HEMATOLOGY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Students must have completed M3 Medicine Core Clerkship.

Purpose

This elective provides opportunity for students to learn recent advance in hematological diseases and stem cell transplantation.

Competencies

The aim of the course is to perform and understand the following:

- Good physical examination and presentation
- The process of treatment decision of hematological diseases
- How to treat acute leukemia (AML, ALL) and lymphoma by chemotherapy
- How to apply molecular targeting therapies to leukemia, lymphoma and myeloma
- How to manage patients after allogeneic stem cell transplantation
- The recent advances of novel agents in multiple myeloma

Instructional features

The students are expected to be an active participant in stem cell transplantation unit, outpatient clinic, ward rounds, conferences, journal clubs, and seminars. All schedules are closely supervised by attending physicians, residents, graduate students, and faculties in the Department of Hematology, and the Department of Transfusion Medicine and Cell Therapy. The students are given responsibilities in evaluating and managing patients, literature review, and presenting materials at the conferences and journal clubs.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Location: 7th floor, east wing (inpatient's ward), 1st floor (outpatient's ward)
Program Director: C. Nakaseko, M.D., Ph.D. (chiaki-nakaseko@faculty.chiba-u.jp)
Administrative Director: C Ohwada, MD. PhD. (chikako_ohwada@faculty.chiba-u.jp)

Requirements

Night Call: No	Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty Contact: 5	Outpatient: 10
Laboratory: 0-2	Inpatient: 20
Independent Study: 3-5	Total Hours /Week: 40

Key words

Hematology, Anemia, AML, ALL, Lymphoma, Myeloma, Stem cell transplantation

ALLERGY AND CLINICAL IMMUNOLOGY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Students must have completed the M3 Core Clerkship in Medicine

Purpose

This clinical elective program will provide the students with experience in the diagnosis and the managements of a spectrum of both allergic and rheumatic diseases
Upon completion, the students should;

1. Be able to identify, diagnose, and treat common allergic or rheumatic diseases.
2. Be able to understand basic concepts in Immunology and pharmacology as they pertain to clinical care.

Competencies

It is the mission of this elective to provide students a solid foundation in Rheumatology and Allergy. This will train them to be physicians who will approach the patient with musculoskeletal and allergic complaints in an organized, efficient and professional manner; who will continue life-long learning in the subspecialties of rheumatology and allergy which will enhance their knowledge base; and will enhance their communication and interpersonal skills as they relate to the subspecialties.

Instructional features

The students will participate in clinical conferences, and observe and assist medical care in an inpatient and outpatient setting. In addition to patient contact, several preceptorial sessions are held during the elective. These seminars cover allergic and rheumatic diseases in depth and emphasize disease mechanisms as well as diagnostic and therapeutic aspects. During the 4-week period, students have ample time for independent reading. Students work closely with faculty and staff of the Division of Rheumatology throughout the 4-week elective.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Hiroshi Nakajima, MD, PhD
Professor of the Department

Requirements

Night Call: No Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 10
Laboratory: 4
Outpatient 6
Inpatient: 12-18

Key words

autoimmunity, allergy, rheumatology, clinical immunology

CARDIOLOGY

	Number of students accepted: 1	Length: 4 Weeks

Prerequisite

Students must have completed their M3 Core clerkships in Medicine.

Purpose

To provide the student advanced clinical experience in cardiology, and cardiovascular imaging.

Competencies

At the end of the course, the student is expected to:
• Perform a good cardiovascular examination;
• Understand cardiac anatomy and physiology and how it applies to the clinical setting;
• Interpret electrocardiograms, echocardiograms, coronary angiograms, and other cardiac images;
• Manage patients with the following cardiovascular conditions: a) Coronary artery disease; b) Heart failure; c) Valvular heart disease; d) Cardiac arrhythmia.

Instructional features

The student will participate in the care of cardiology patients on the inpatient service. The cardiovascular physical examination skills will be taught at bedside. Additionally, the student will gain experience in each of the following areas week by week accompanied by experts:
• Non-invasive testing including echocardiography (transthoracic and transesophageal), exercise/dobutamine echocardiography, exercise stress testing, nuclear cardiology, cardiac MRI, positron emission tomography, and ultrafast CT scanning;
• Interventional cardiology procedures including cardiac catheterization, coronary angioplasty, percutaneous rotablator therapy, coronary stenting, and intravasucular ultrasound;
• Cardiac electrophysiology, including indications, diagnostic electrophysiology studies, ablative techniques, and pacemaker and defibrillator placement.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Y. Kobayashi (Professor)
Attending: Y. Iwata (Assistant professor) yoiwata-chiba@umin.org

Requirements

Night Calls: Optional Weekends: Optional

Hourly breakdown per week

Inpatient: 10
Imaging / Catheter Laboratories: 15
Outpatient / ER: 10
Lectures/Conferences/Faculty contact: 5 Total hours/week 40

Key words

Cardiology, ECG, echocardiography, coronary intervention, electrophysiology

PULMONARY MEDICINE

	Number of students accepted: 6	Length: 2 Weeks

Prerequisite

Students must have completed the M3 Core Clerkship in Medicine.

Purpose

The students will be expected to realize diagnosis and management of patients who are required hospitalization for respiratory diseases such as acute exacerbation of COPD, pneumonia, pulmonary hypertension, lung cancer, status asthmaticus, interstitial lung disease and acute respiratory failure, et al. The student will have hospital exposure to many pulmonary illnesses along with ventilator care, laboratory diagnostics modalities which include chest X-rays, computed tomography scans, pulmonary function tests, bronchoscopies and thoracentesis. Experience in the outpatient clinic dealing with common pulmonary diseases will also be available.

Competencies

- Basic interpretation of chest X-rays and computed tomography scans of the lung.
- Interpretation of pulmonary function tests
- Basic understanding of respiratory failure
- Understanding pathophysiology and treatment of respiratory diseases, including lung cancer, asthma, COPD, pulmonary hypertension, interstitial lung disease and pleural effusion, et al.

Instructional features

The student will be involved in direct patient care, seeing new consults, making daily rounds on current patients, seeing brochoscopies, thoracenteses, and pulmonary function testing. They will round with the pulmonologists, discussing each in-patient and be asked to make short (5 -10 minute) presentations on various pulmonary topics.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: S. Sakao and K. Tatsumi

Requirements

Night Call: No	Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty Contact: 10	Laboratory/Independent Study: 6
Outpatient: 2	Inpatient: 22
Total Hours /Week: 40	

Key words

Pulmonary Disease, Pulmonary Function Testing, Exercise Testing, Bronchoscopy.

NEUROLOGY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Students must have completed their M3 Core clerkships in Medicine, Pediatrics, and Surgery.

Purpose

The objective of this program is to give the student advanced clinical experience in neurology, neurophysiology, neuroimmunology, and neuroimaging beyond the required specialty rotation.

Competencies

Advanced neurologic diagnosis and management with clinical-anatomic-radiologic correlation, and electrodiagnostic-clinical correlation.

Instructional features

The student will participate in the care of neurology patients on the neurology inpatient service, as well as consult services at outpatient clinics at Chiba University Hospital. She/he will have the responsibility of performing neurological examination, and participating in the plan for care along with the resident and attending. Optional programs include neuroimaging courses (reading MRI, CT, and SPECT) and clinical neurophysiologic testing (nerve conduction study, EMG, and evoked potentials). Short lectures may be available for representative neuroimmunological diseases (multiple sclerosis, Guillain-Barre syndrome, and myasthenia gravis), focusing on regional differences in the clinical features, pathophysiology, and treatment between the USA and Japan.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: S. Kuwabara kuwabara-s@faculty.chiba-u.jp
Department of Neurology

Requirements

Night Call: No Weekends: Optional

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 10
Laboratory: 2
Outpatient 8
Inpatient: 20 Total hours/week 40

Key words

Advanced neurology, diagnosis and management, clinical-anatomic correlation, neuroimaging, clinical neurophysiology

PEDIATRICS

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Students must have completed their M3 Core clerkships in Medicine and Pediatrics.

Purpose

The objective of this program is to give the student advanced clinical experience with disease of neonates, infants, children, and adolescents, as well as with normal infants and children. Normal processes of growth and development are emphasized. The students must understand the diseases of children based on age-related physical, psychological, social background.

Competencies

(1) Understand normal growth and development from neonatal period through adolescence.
(2) Experience with a wide variety of acute and chronic inpatient pediatric cases.
(3) Identify and assess clinical and socioeconomic problems in pediatric patients.
(4) Improve case presentations and discussion on ward rounds and at conferences.

Instructional features

The student will participate in the care of pediatric patients on the inpatient service including NICU, as well as consult services at outpatient clinics at Chiba University Hospital. She/he will have the responsibility of participating in the plan for care along with the resident, chief and attending. The student will round with the team and attend general pediatric conferences.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Prof. Yoichi Kohno, MD, PhD kohnoy@faculty.chiba-u.jp

Requirements

Night Call: No Weekends: Optional

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 10
Laboratory: 2
Outpatient 8
Inpatient: 20 Total hours/week 40

Key words

Pediatric medicine, comprehensive care, neonates, infants, children, adolescents

GENERAL MEDICINE

	Number of students accepted: 1	Length: 2 weeks

Prerequisite

Students must have completed their M3 Core clerkships.

Purpose

To learn the principles of clinical problem solving and ambulatory medicine.

Competencies

At the end of the course, the student is expected to:
1) understand the proper assessment and management of an underdiagnosed symptom and health problem of a patient using a comprehensive approach to address all biopsychosocial problems without being restricted to an organ system or disease.
2) understand the importance of medical interview, which can independently facilitate definitive diagnosis of a majority of disease or illness.

Instructional features

The student will observe how a senior resident examines a patient with an underdiagnosed symptom, discuss the patient's health problems with the senior resident and attending physician, confirm the patient's diagnosis, and develop management plans.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: M. Ikusaka e-mail: chiba_u_soshin@mac.com
Department of General Medicine

Requirements

Night call: No Weekends: No

Hourly breakdown per week

Outpatient: 30
Lecture/Conference/Faculty contact: 10
Total hours/week: 40

Key words

Clinical problem solving, ambulatory medicine

PHYSICAL MEDICINE AND REHABILITATION

	Number of students accepted: 1	Length: 1 Weeks

Prerequisite

Students must have completed their M3 Core clerkships in Medicine and Surgery.

Purpose

The rehabilitation electives provide students an experience of the physical medicine and rehabilitation in general hospital.

Competencies

Instructional features

The student will participate in functional evaluation of patients.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Requirements

Night Call: No Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 1
Laboratory: 0
Outpatient
Inpatient (consultation): 2 Total hours/week 24

Key words

PSYCHIATRY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Students must have completed their M3 Core clerkship in Medicine, Pediatrics, and Surgery.

Purpose

The objective of this program is to give the student advanced clinical experience in clinical psychiatry, psychiatric medicine, neurobiology, clinical psychology, psychotherapy, or related region of mental health science beyond the required specialty rotation.

Competencies

Advanced psychiatric diagnosis and treatment with evidence based bio-psycho-socio multidimensional model.

Instructional features

The student will participate in the care of patients with mental disorder on the psychiatry inpatient and/or outpatient service at Chiba University Hospital. She/he will have responsibility of performing clinical interview with patients and family, clinical assessment including some of rating scale, general examination, neuroimaging (brain CT, MRI, SPECT) and so on. Therapeutic approaches with cognitive behavioral therapy and/or other psychotherapy for inpatient are available. Attending to lectures and Clinical & Research Meetings are recommended.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: M. Iyo; iyom@faculty.chiba-u.jp

Requirements

Night Call: Optional	Weekends: Optional

Hourly breakdown per week

Lectures 2	Inpatient 20
Conference 6	Outreach Service 2
Laboratory 2	
Outpatient 8	Total hours/ week 40

Key words

Psychiatry, neurobiology, evidence based medicine, cognitive behavioral therapy, clinical research

EMERGENCY AND CRITICAL CARE MEDICINE

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Students must have completed all M3 core clerkships.

Purpose

To help the student understand the mechanism of development of critical illness.
To recognize any organ system failures as they present in the critically ill patients.
To provide exposure to the various diagnostic, monitoring, and therapeutic methods used in the management of critically ill patients.

Competencies

Students will be expected to gain a better understanding of emergency and critical care diseases and patient care as well as cutting-edge of scientific research in critical care fields.

Instructional features

The students will participate in morning and evening conferences, intensive care unit (ICU) rounds, journal club, morbidity and mortality conferences, research conferences, and other academic activities. In twice daily ICU conferences in the ICU, each patient will be presented. The critical illness, other underlying diseases, and methods of monitoring will be discussed. Potential complications, their recognition and management will be explained. The students will also observe treatments for the patients at the Emergency Department. The students will be able to experience some laboratory works as well at their request.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Shigeto Oda, M.D, Ph.D. odas@faculty.chiba-u.jp
Department of Emergency and Critical Care Medicine, Chiba University Hospital

Requirements

Night Call: Optional Weekends: Optional

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 20
Laboratory: 5
Outpatient 10
Inpatient: 10 Total hours/week 45

Key words

Academic Critical Care, Artificial Organ Support, Clinical Genomics

GENERAL SURGERY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

No requirement

Purpose

To provide students an excellent experience of the surgical practice in hepatobiliary-pancreatic surgery and breast surgery. At the end of the elective, students will be able to have skills of clinical management of patients who undergo surgery, and to discuss diagnosis and treatment at clinical case conferences based on a practical knowledge of the clinical field of surgery.

Competencies

Students are expected to obtain a rewarding learning experience and greater knowledge of surgery. This course will also provide an opportunity to understand current international concepts of the surgical field, especially hepatobiliary-pancreatic surgery.

Instructional features

The students will participate in surgical case observation, clinical conferences, morning case presentations, ground rounds, resident seminars, and other academic activities. The student will be assigned to selected patients and will carry out preoperative evaluation, will assist in surgical procedures, and will follow up with the patient postoperatively. The student has to study relevant anatomy prior to coming to the operation room present in each elective patient.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Masaru Miyazaki, MD, PhD. masaru@faculty.chiba-u.jp. Department of General Surgery

Requirements

Night Call: No Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 10
Laboratory: 2
Inpatient: 30 Total hours/week 40

Key words

ESOPHAGO-GASTRO-INTESTINAL SURGERY

Practical course of surgery and endoscopic treatments for digestive diseases

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Student must have completed an M3 surgical clerkship.

Purpose

The major objective for students participating in the digestive surgery is the total understanding of surgical procedures, which includes preoperative diagnosis and managements, surgery, peri- and postoperative managements.

Competencies

The following objectives should be accomplished:

1) Learn how to make appropriate examination for precise diagnosis and managements for surgery,
2) Learn treatment for Esophageal cancer, Gastric cancer, Colo-rectal cancer, IBDs.
3) Endoscopic treatment procedures (ESD/EMR).

Instructional features

The surgical experience is basically provided 2 or 3 days a week. The educations are given to each student which includes regular rounds and clinical conferences. There are also opportunities to take part in endoscopic and/or X-ray examination at least 2 days a week. We also provide the students with excellent experience of high-quality digestive surgery in Japan (including laparoscopic surgery). Students have opportunities of diagnostic procedures (endoscopy and X-ray), endoscopic surgery (ESD/EMR) and chemotherapy.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Professor Hisahiro Matsubara, MD, PhD,**matsuhm@faculty.chiba-u.jp**

Requirements

Night Call: No	Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 2	Endoscopic examination 3
Surgery 12	X-ray examination 3
Outpatient 0	
Inpatient: 15	Total hours/week 35

Key words

GENERAL THORACIC SURGERY
(Lung & Mediastinal Surgery)

	Number of students accepted: 1	Length: 4 Weeks

Prerequisite

Open to students who have completed the M3 Core Clerkship in Surgery.

Purpose

The major objective for students participating in the general thoracic sub specialty is the total management of patients with lung cancer or mediastinal tumor admitted to the general thoracic surgical unit. All areas of general thoracic surgery except esophageal disease will be covered, including oncology, intervention, immunology, thoracoscopic surgery (VATS), and bronchoscopy.

Competencies

Students will be expected to gain a better understanding of lung cancer, mediastinal tumor and patient care.

Instructional features

The students will participate in clinical conferences, and observe and/or assist medical care in an inpatient and outpatient setting. Lectures about specific features of general thoracic surgery and/or endobronchial diagnosis/treatment in Japan will be provided for the students.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Ichiro Yoshino, MD, PhD iyoshino@faculty.chiba-u.jp
Department of General Thoracic Surgery

Requirements

Night Call: No Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 4-6
Laboratory: 0
Outpatient 0-2
Inpatient: 34 Total hours/week 40

Key words

Surgery, lung cancer, mediastinal tumor, thoracoscopic surgery (VATS), bronchoscopy, endobronchial ultrasound (EBUS)

CARDIOVASCULAR SURGERY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

No requirement

Purpose

To obtain basic knowledge of cardiovascular anatomy, pathophysiology of heart disease, theory for planning surgical procedure, and perioperative management including hemodynamic monitoring.

Competencies

Students will be able to
(1) Understand surgical anatomy and surgical pathology of congenital and acquired cardiovascular disease.
(2) Take a history, physical exam, and elucidate a surgical patient's problem.
(3) Understand clinical significance of diagnosis and develop efficient plan of diagnostic tests.
(4) Understand theory of surgical decision making based on scientific and clinical evaluation.
(5) Obtain basic knowledge of cardiopulmonary bypass system and of physiology and practice of myocardial protection.
(6) Plan postoperative management including fluid infusion, transfusion, antibiotics, nutrition, and anticoagulant therapy, based on each patient's disease and surgical procedure.
(7) Improve case presentation skills summarizing history, physical exam, diagnostic findings and clinical course.

Instructional features

The objectives will be obtained by the following instructional methods:
Attendance of morning case conference, daily teaching rounds, weekly grand rounds, weekly case conference, and weekly journal club with cardiothoracic faculty and residents.
Observation in the operating room.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Goro Matsumiya, MD, PhD matsumg@faculty.chiba-u.jp

Department of Cardiovascular Surgery

Requirements

Night Call: No Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 8
Laboratory:0
Outpatient:0
Inpatient: 32 Total hours/week 40

OBSTETRICS & GYNECOLOGY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Students must have completed their M3 Core clerkships in Obstetrics and Gynecology.

Purpose

This elective combines obstetrical and gynecologic care. Two weeks are spent providing gynecologic care, which includes evaluation and management of common acute and chronic gynecologic conditions. Patients will be seen in the hospital, in the clinic, emergency room and operating room. The remaining two weeks are spent in the Obstetrical Special Care Unit developing skills in management of delivery of the high risk patient and management of obstetrical emergencies in the otherwise low risk patient. If desired, a student can spend the entire rotation on either OB or GYN depending on the availability.

Competencies

Emphasis is placed on history and physical examination skills in the evaluation and management of pregnancy, vaginal delivery, and both office gynecology and gynecologic surgical procedures through exposure to patients in the outpatient clinics, Labor and Delivery, and the operating room.

Instructional features

TYPE/FORMAT: Outpatient/ambulatory care experience (one-to-one instruction), Inpatient ward experience (small group instruction), Library time/independent study, Lectures, conferences, seminars, grand rounds, etc.
RESPONSIBILITIES: Work up and follow patients, On-call schedule; one night per 2 weeks, Interpreting clinical data (X-rays, lab results, etc.), Attendance of conferences, grand rounds, research seminars, lectures, Reading of literature and research, Patient presentations, Required topic presentations; minimum on one, Observe procedural techniques

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Hisao Osada, MD, PhD
hosada@faculty.chiba-u.jp, Department of Maternal-fetal Medicine

Requirements

Night Call: One night per 2 weeks Weekends: Optional

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 6
Laboratory: 2
Outpatient 8
Inpatient: 24 Total hours/week 40

Key words

ORTHOPEDIC SURGERY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

No requirement

Purpose

To provide students an excellent experience of the contemporary orthopedic practice in Japan, including spine surgery, hip surgery, knee surgery, hand surgery, and related research.

Competencies

Students are expected to obtain a rewarding learning experience and greater knowledge of orthopedics. We anticipate that they will gain a better understanding of diagnosis and surgical treatments of patients with orthopedic diseases. This course will also provide an opportunity to understand current international concepts in the orthopedic field.

Instructional features

The students will participate in surgical case observation, clinical conferences, morning case presentations, ward rounds, journal club, resident seminars, and other academic activities. They will be encouraged to spend time in the operation room on Monday, Wednesday, and Friday. It is expected that they will read about the diseases, perform operative procedure, and study relevant anatomy prior to coming to the operation room for all elective cases. In each case, attending staff will be happy to suggest appropriate reading materials and explain the details about the case. We have five units in our department; 1) cervical spine and spinal cord, 2) lumbar spine, 3) hand, 4) hip, and 5) knee and sports medicine. In addition, case observation of pediatric orthopedics and/or bone tumor would be possible at the designated hospitals.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Kazuhisa Takahashi, MD, PhD 19501114@faculty.chiba-u.jp
Department of Orthopedic Surgery

Requirements

Night Call: No Weekends: Optional

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 10
Laboratory: 4
Outpatient 6
Inpatient: 10-20 Total hours/week 30-40

Key words

OTORHINOLARYNGOLOGY
Head and Neck Surgery

	Number of students accepted: 1	Length: 4 Weeks

Prerequisite

Student must have completed an M3 clerkship.

Purpose

This elective is targeted toward those students interested in developing knowledge of otorhinolaryngology beyond that required of the primary care physician. Students on this elective will play a great role in the inpatient care and in operating room procedures. Students will be taught to identify head and neck pathology, to complete an appropriate work-up of the disease process and to manage head and neck disease processes.

Competencies

Students will be expected to gain a better understanding in general otorhinolaryngology - head and neck surgery and includes the diagnosis and treatment of head and neck neoplasms

Instructional features

The student will be assigned to selected patients and will carry out preoperative evaluation, will assist in surgical procedures on that patient, and will follow up with the patient postoperatively, both in the hospital and in the clinic setting. The student will present his/her own patients at conferences.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Yoshitaka Okamoto, MD, PhD yokamoto@faculty.chiba-u.jp
Department of Otorhinolaryngology - Head and Neck Surgery

Requirements

Night Call: No Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 4
Laboratory: 2
Outpatient 4
Inpatient: 30 Total hours/week 40

Key words

NEUROSURGERY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Student must have completed an M3 clerkship.

Purpose

The objective of this program is to give students advanced clinical experience in neurosurgery

Competencies

This course will provide a better understanding of diagnosis and surgical treatments of patients with neurosurgical diseases.

Instructional features

The students will participate in the care of neurosurgical patients on the neurosurgical inpatient service, as well as consult services at outpatient clinics at Chiba University Hospital. They will also participate in surgical case observation, clinical conferences, morning case presentations, ward rounds, journal club, resident seminars, and other academic activities. They will have the responsibility of performing neurological examination, and participating in the plan for care along with the resident and attending. Our department is divided into six groups; 1) pituitary and skull-base tumor (including endoscopic treatment), 2) malignant tumor, 3) vascular lesion (including endovascular treatment), 4) functional surgery, 5) spinal surgery, and 6) hydrocephalus (including endoscopic treatment).

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Naokatsu Saeki, MD, PhD nsaeki@faculty.chiba-u.jp
Department of Neurosurgery

Requirements

Night Call: No Weekends: Optional

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 4
Laboratory: 2
Outpatient :2-4
Inpatient: 30-40 Total hours/week 40-50

Key words

UROLOGY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Student must have completed an M3 clerkship.

Purpose

The elective in urology is designed to provide students with an introduction to basic urologic practice. At the end of the elective, students will be able to demonstrate clinical management of urologic patients, and discuss diagnosis and treatment at clinical case conferences based on a practical knowledge of the clinical field of urology as well as a basic understanding of the more commonly encountered urological problems. All areas of urology will be covered, including urologic oncology, stone disease, infertility, microsurgery, laparoscopic surgery, and urodynamics.

Competencies

Students will be expected to gain a better understanding of urologic diseases and patient care.

Instructional features

The student will be assigned to selected patients and will carry out preoperative evaluation, will assist in surgical procedures on that patient, and will follow up with the patient postoperatively, both in the hospital and in the clinic setting. The student will present his/her own patients at conferences. The course allows the student to function as a junior house officer.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Tomohiko Ichikawa, MD, PhD tomohiko_ichikawa@faculty.chiba-u.jp
Department of Urology

Requirements

Night Call: No Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 4
Laboratory: 2
Outpatient 4
Inpatient: 30 Total hours/week 40

Key words

OPHTHALMOLOGY

	Number of students accepted: 5	Length: 1 Week

Prerequisite

Student must have completed an M3 clerkship.

Purpose

To provide students an excellent experience of the contemporary ophthalmic practice in Japan, including cataract surgery, vitrectomy and related research.

Competencies

Students are expected to obtain a rewarding learning experience and greater knowledge of ophthalmology. We anticipate that they will gain a better understanding of diagnosis and surgical treatments of patients with ophthalmic diseases. This course will also provide an opportunity to understand current international concepts in the ophthalmic field.

Instructional features

The students will participate in surgical case observation, clinical conferences, morning case presentations, ward rounds, resident seminars, and other academic activities. They will be encouraged to spend time in operation rooms on Tuesday and Thursday. It is expected that they will read about the diseases, perform operative procedure, and study relevant anatomy prior to coming to the operation room for all elective cases. In each case, attending staff will be happy to suggest appropriate reading materials and explain the details about the case.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Hirotaka Yokouchi, MD, PhD
E-mail : yokouchi123ninth@yahoo.co.jp
Department of Ophthalmology

Requirements

Hourly breakdown per week

Key words

DERMATOLOGY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Student must have completed an M3 clerkship. Ability of conversation in Japanese is required to take a clinical history from the outer patient.

Purpose

We provide students with an introduction to basic and advanced dermatologic practice. At the end of the elective, students will be able to discuss clinical and pathologic diagnosis and demonstrate clinical management of dermatologic patients, at our conferences based on a practical knowledge of the clinical field of dermatology. All areas of dermatology will be covered, including atopic dermatitis, psoriasis, bullous disease, skin benign or malignant tumors and so on.

Competencies

Students will be able to obtain a better understanding of dermatologic diseases and patient management.

Instructional features

Day time: Student will accompany the process of clinical diagnosis, treatment, biopsy and operation, and postoperative management of skin disease patients at clinic and hospital.
Evening: The students will be able to participate in clinical and pathological conferences, and observe the process diagnosis and treatment with out or inpatients.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Naotomo Kambe, MD, PhD nkambe@faculty.chiba-u.jp
Department of dermatology

Requirements

Night Call: No Weekends: Optional

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 4
Laboratory: 2
Outpatient 12
Inpatient: 22 Total hours/week 40

Key words

PLASTIC AND RECONSTRUCTIVE SURGERY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Student must have completed an M3 surgical clerkship.

Purpose

Students will be able to demonstrate an understanding of body surface injury (including facial bone fracture and scar contracture), skin tumors (benign and malignant), congenital malformation of body surface, plastic surgery, and reconstructive surgery by experience of patient care. Student will accompany the process of diagnosis, treatment, operation, and postoperative management of patients at clinic and hospital. Student will be expected to have skills of skin suture, including designing and performing skin incision, undermining, subcuticular suture, and skin suture. Student will learn the issues of scarring in Asian patients, and the different selection of skin suture methods. Student will also experience keloid, double eyelid operation, and operation of osmidrosis, which are rarely seen in Europe and the USA, and have the opportunity to learn the theory and practical technique of plastic surgery such as Z-plasty, W-plasty, local flap, and tips for removal of small skin tumors.

Competencies

Instructional features

The students will participate in clinical conferences, and observe and assist medical care in an inpatient and outpatient setting. Lectures about specific features of plastic and reconstructive surgery in Japan will be provided for the students.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Nobuyuki Mitsukawa, MD, PhD nmitsu@air.linkclub.or.jp

Requirements

Night Call: No Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty contact:
Laboratory: 0
Outpatient
Inpatient: Total hours/week 55

Key words

PEDIATRIC SURGERY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Students must have completed all M3 core clerkships in pediatrics and surgery.

Purpose

The purpose of the course is to provide thorough exposure to clinical pediatric surgery practice.

Competencies

Student will be able to
(1) Explain the basic etiology and pathogenesis of common pediatric surgical diseases.
(2) Demonstrate proper treatment of common pediatric surgical diseases.

Instructional features

During the rotation, the students will join the pediatric surgery team and take part in the diagnostic process, decision making, and practice of pediatric surgery. They will be primarily responsible for the management of patients assigned to them. The weekly schedule consists of two days in the operation room, one day in the outpatient clinic, and the rest of the week in the inpatient ward. Students are also required to see patients that require immediate surgical attention. They will be given opportunities to give presentations at the weekly pediatric surgery board and the monthly pediatric tumor board.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Professor Hideo Yoshida, M.D.
Contacts to: Tomoro Hishiki, M.D. hishiki@faculty.chiba-u.jp
Department of Pediatric Surgery, Chiba University Hospital

Requirements

Night call: no Weekends: optional

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 5
Outpatient 7
Inpatient 23 Total hours / week: 35

Key words

RADIOLOGY

	Number of students accepted: 1	Length: At least 2 Weeks

Prerequisite

No requirement

Purpose

The radiology elective is designed to offer students additional exposure to the practice of clinical radiology.

Competencies

Students choose diagnostic radiology, or radiation oncology, or both. In diagnostic radiology, emphasis is placed on the appropriate application and usefulness of imaging procedures in specific clinical settings, their limitations and risks, and their relative value in particular clinical disorders. In radiation oncology, the student will learn the fundamentals of oncology, radiobiology, and physics as it pertains to radiation therapy.

Instructional features

In diagnostic radiology, the student will be introduced to all aspects of diagnostic imaging. The major portion of the clerk ship will be devoted to image interpretation. The student will be asked to make a short, formal presentation on some relevant subject at our weekly radiology rounds.
In radiation oncology, the students will gain knowledge at individual discussion with attending physicians. The students will participate in treatment planning sessions. Our department offers three dimensional radiation therapy planning and treatment capabilities that provide students a unique opportunity to gain experience using modern radiation therapy treatment

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Takashi Uno, MD, PhD unotakas@faculty.chiba-u.jp

Department of Radiology

Requirements

Night Call: No. Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty contact:
10-20
Laboratory: 0
Outpatient 0-8
Inpatient: 0-30 Total hours/week 30-40

Key words

ANESTHESIOLOGY AND PALLIATIVE CARE MEDICINE

	Number of students accepted: 2	Length: 3 Weeks

Prerequisite

Students must have completed their M3 Core Clerkships in Medicine and Surgery.
NOTE: This course is offered after September.

Purpose

The objective of this program is to give the student advanced clinical experience in anesthesiology, respiratory physiology, and palliative care beyond the required specialty rotation.

Competencies

In the process of the completing this course, the student should be able to evaluate the risk of airway management with airway check sheet. He/she should know to manage airway with NPA, OPA, face mask, etc. Understand the difference of general, regional, also the basics of high risk anesthesia should be understood which includes monitors, special anesthetic techniques, transfusions and inotropic infusions. The student should have an excellent knowledge base of respiratory physiology and mechanism and therapy for sleep apnea.

Instructional features

The first meeting is an orientation and introduction to Anesthesia at clinical laboratory at 1 pm on first Monday. She/he will have the responsibility of performing general anesthesia, pre-round, and post-round along with supervisor. Short lectures may be available for respiratory physiological study, focusing on correlation between pain and dyspnea. Students are expected to attend all didactic lectures that the site has to offer (different sites have different times).

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: S. Isono, shirohisono@yahoo.co.jp
Department of Anesthesiology and Palliative Care Medicine

Requirements

Night Call: No Weekends: Optional

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 2.5
Laboratory: 3
Pre case Discussion 2.5
Operating Room: 32 Total hours/week 40

Key words

General anesthesia, respiratory physiology, sleep apnea, airway management

DENTISTRY AND ORAL SURGERY

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

The student must have completed an M3 clerkship

Purpose

The purpose of this program is to provide the students advanced clinical experiences in the treatment of dental and oral-maxillofacial diseases.

Competencies

The students are expected to understand the characteristics of the diseases and obtain practical skills for the treatment.

Instructional features

The students will participate in our routine work at Chiba University Hospital, including clinical conference, resident seminar, dental care, oral-maxillofacial surgery. In the operation room, the students can learn advanced and innovative clinical approaches as well as general techniques for oral cancer.

Assessment

The students will be evaluated by mini-clinical evaluation exercise(mini-CEX, "CC snapshot"), portfolio, case reports, oral examination,and clinical performance examination (CPX). Each will be measured by five Likert scale.

Administrative information

Program Director: Prof. Hideki TANZAWA, MD, DDS, PhD
(tanzawap@faculty.chiba-u.jp)
Department of Dentistry and Oral Surgery

Requirements

Night Call: No Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 10
Laboratory: 0
Outpatient: 20
Inpatient: 10

Key words

dentistry, oral surgery, oral cancer

SURGICAL PATHOLOGY

Pathological diagnosis of malignant tumors

	Number of students accepted: 2	Length: 4 Weeks

Prerequisite

Students must have completed all M3 core clerkships.

Purpose

Students should be able to understand the process and usage of pathological diagnosis of biopsy and operational samples. Students who take the 4-week course will be able to demonstrate basic skills of pathological diagnosis using clinical samples of malignant tumors (lung cancer, esophageal cancer, stomach cancer, colon cancer, and brain tumor).

Competencies

Student will be able to

(1) Explain the clinical significance of pathological diagnosis and process of diagnosis based on clinical information and pathological findings.
(2) Demonstrate proper treatment of biopsy and operation samples.
(3) Explain the report of pathological finding and diagnosis.
(4) Explain the role of intraoperative rapid diagnosis.

Instructional features

(1) AM: Attend review meeting (conference) of biopsy samples.
(2) Practice macroscopic examination of operational samples (lung, digestive tract) and preparation for specimen.
(3) Using above specimen, practice microscopic diagnosis and writing pathological diagnosis in English under supervision of faculty members
(4) Discuss cases at clinical-pathological conferences with specialists.

Assessment

At the end of the course, students will be assessed by oral examination using students' pathological reports.

Administrative information

Program Director: Yukio Nakatani, M.D. nakatani@faculty.chiba-u.jp
Department of Pathology, Chiba University Hospital

Requirements

Night Call: No Weekends: No

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 25
Laboratory: 10
Outpatient 0
Inpatient: 0 Total hours/week 35

Key words

OCCUPATIONAL AND ENVIRONMENTAL MEDICINE

Basic practical course of occupational health system and environmental health problems in relation to culture, economic activity, and history in Japan

	Number of students accepted: 2	Length: 2 Weeks Not available May-Jun., Sept.-Nov.

Prerequisite

No requirement

Purpose

To understand the occupational health system, environmental problems, and mechanisms, treatment, and prevention of induced diseases and disorders in relation to culture, economic activity, and history in Japan. More precise educational objectives and contents will be discussed with students at the beginning of the course.

Competencies

Instructional features

The students will learn by lecture and fieldwork.
A Occupational health system: fieldwork at industries in Chiba.
B Environmental health problems: fieldwork for ITAIITAI disease, Japanese pollution disease, JINTSU valley in Toyama (6 days)

Assessment

The student will be evaluated by a report.

Administrative information

Program Director: Yasushi Suwazono suwa@faculty.chiba-u.jp
Department of Occupational and Environmental Medicine

Requirements

Night Call: No	Weekends: Optional

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 5	Fieldwork
Laboratory: 0	
Outpatient 0	
Inpatient: 0	Total hours/week 30

Key words

MOLECULAR DIAGNOSIS, CLINICAL GENETICS AND PROTEOMICS

Department of Molecular Diagnosis & Division of Clinical Genetics and Proteomics

	Number of students accepted: 1	Length: 4 Weeks

Prerequisite

Students must have completed all M3 core clerkships.

Purpose

21st century is the so-called post-genomic era and a variety of ***post-genomic technologies*** have begun to been applied to clinical medicine. Proteomic and genomic approach to clinical medicine have been rapidly progressing; so our field of ***Molecular Diagnosis & Division of Clinical Genetics and Proteomics*** is pretty attractive and is necessary for present and future medicine. The information of pharmacogenomics, biomarkers for cancer detection and monitoring, indicators of the difference among individual genetic background, pre-onset or pre-neonatal diagnosis, all these are essential for medical doctors. Again, technologies, background of molecular biology that closely related to genetic and proteomic analysis is eagerly required for medical students. ***Minimum essential training and lectures*** to accomplish these purposes are prepared in our course.

Competencies

1. Genetic testing and genetic counseling : establishment of individualized medicine based on genomics, transcriptomics and proteomics
2. Genetic risk assessment for cancers and other common polygenic diseases
3. Predictive testing for late onset hereditary diseases
4. Cost effectiveness of medical tests and decision analysis
5. Pathogenesis of alcoholic liver diseases and drug-induced liver disease
6. Clinical perspectives of *c-myc* gene regulation, splicing regulation and DNA damage repair.
7. Pathophysiology and non-invasive diagnosis of NASH (non-alcoholic steatohepatitis)

Instructional features

Basic training of molecular, genetic and proteomic technologies useful for medical students. Application of gel-based- and gel-free proteomic technologies to discover and identify novel biomarkers for a variety of human disorders.
Ethical and social issues needed for genetic counseling of hereditary disease.

Assessment

Evaluation by the faculty who supervise the student.

Administrative information

Program Director: **Professor Fumio Nomura, M.D., Ph. D.**
E-mail: fnomura@faculty.chiba-u.jp

Requirements

Night Call: No Weekends: Optional

Hourly breakdown per week

Lectures/Conferences/Faculty contact: 10 Laboratory: 2
Total hours/week 40

Key words

Proteomics, Genetics, Transcriptomics, Pharmacogenomics (PGx), Genetic testing and genetic counseling, Hereditary disease, Mass spectrometry, Post-genome, Medical testing, Biomarkers, individualized medicine (personalized medicine)