Course Coding(科目ナンバー)	Year/Semester/Term(年度・学期)	Faculty Offering Course(時間割所属・時間割コード)	Eligible Student Year(開講年次)	Credits(単位数)	Weekday and Period(曜日・時限)
RDM7-009-82-2	2025whole year	Graduate School of Medical Sciences (20100)	1, 2, 3, 4	2	others

Course Title(Theme)(科目名(講義題目))	Instructor(s)(担当教員)
Current Theory of Medical Diagnosis(C1 Current Theory of Medical Diagnosis)	HIRAI Toshinori, MIKAMI Yoshiki, MATSUI Hirotaka, GOTO Hiroki, KOJIMA Akihiro, SHIRAISHI Shinya, KOMOHARA Yoshihiro, UEDA Mitsuharu, Jiyouno Hirofumi, SHINRIKI Satoru, Misumi Youhei, BABA Masaya, SATO Yonosuke

Goals with their ratio(学修成果とその割合)
1.Advanced expert knowledge, skill and research capability ‥‥45% 2.Profound inter-disciplinary knowledge ‥‥45% 3.Global perspective and ability to take initiative action ‥‥5% 4.Social leadership drive ‥‥5%

Type of Class(授業の形態)	Lecture
Teaching Method(授業の方法)	PowerPoint files will be used for giving the lectures, and active participation in the discussion is encouraged. Extra classes or video lectures will be considered for those who are regularly absent due to unavoidable reasons.
Course Goals(授業の目的)	The lecture series “Current Theory of Medical Diagnosis” afford fundamental and current general views of modern medical diagnostic techniques and their application in practical medicine and medical research.
Course Learning goals(学修目標)	【A level (A水準)】 Students are expected to understand cutting-edge advanced method for disease diagnosis. Students are also expected to find devise a method to discover unsolved problems and lead to solutions. 【C level (C水準)】 Students are also expected to find devise a method to discover unsolved problems and lead to solutions.
Course Outline(授業の概要)	In the field of Pathology, current morphology and its application for cancer diagnosis will be introduced. In addition, molecular approaches for a research in cancer cell differentiation, proliferation and invasion, blood coagulation system and immune reaction (especially on macrophage) will be shown. In the field of laboratory medicine, we will outline advanced diagnostic approaches through genome analysis and databases in the post-genome era, and introduce the basics and practices of "cancer genomic medicine" that are currently being practiced. In the field of Radiology, detailed implication of CT and MRI images and their application for researchers will be presented. In the field of Isotope Science, basic research such as SPECT and immuno-PET using mouse models, as well as RI molecular imaging and nuclear medicine treatments are outlined. In the field of Neurology, recent advances in the neurological diagnosis will be given to the students.

Details for Individual Classes(各回の授業内容)

No.(回)	Date(月日)	Class Theme(授業テーマ)	Brief Outline of Class(内容概略)
1		Sato Y (Pathol Exp Med) 【eJ-0】	Tumor diagnosis with immunohistochemistry.
2		Komohara Y (Cell Pathol) 【eJ-0】	pathology and immunity; Cancer Immunotherapy and PD-L1
3		Komohara Y (Cell Pathol) 【eJ-0】	Pathology and Immunity: The Microenvironment of Cancer
4		Komohara Y (Cell Pathol) 【eJ-0】	Pathology and Immunity: Cancer Immunity and Lymph Nodes
5		Mikami Y (Pathol Diagnosis)【eJ-0】	Histopathologic approach to diagnostic oncology: a logic for interpretation of morphology.
6		Ueda M (Neurology) 【eJ-L0】	Recent advances in diagnostic methods for intractable neurological diseases
7		Misumi Y (Neurology) 【eJ-0】	Advanced diagnostic approaches for rare and inherited diseases
8		Shinriki S (Laboratory Medicine) 【eJ-0】	Application of next generation sequencing for clinical diagnosis
9		Shinriki S (Laboratory Medicine) 【eJ-0】	Practice and prospect of clinical diagnostic medicine
10		Jono H (Clin Pharm Sci) 【eJ-0】	Drug discovery research based on basic and clinical evidence
11		Hirai T (Diag Radiology) 【eJ-0】	Forefront of MR imaging and research approaches
12		Hirai T (Diag Radiology) 【eJ-0】	Forefront of CT imaging and research approaches
13		Goto H (RI Science) 【eJ-0】	Molecular Imaging Using RI [Basics]
14		Shiraishi S (RI Imaging) 【eJ-0】	Molecular Imaging Using RI [Clinical]
15		Not open this year	

Estimated out-of-class study time	This course consists of content that requires 90 hours of study. Since the classes will be 30 hours long (2 hours x 15 sessions), 60 hours worth of prior and post-work studies (including assignments, etc.) will be required to deeply understand the classes.
Required Textbook(テキスト)	Each instructor will specify as needed.
Reading List(参考文献)	Each instructor will specify as needed.
Enrollment Conditions(履修条件)	
Assessment Methods and Criteria(評価方法・基準)	Grading will be based on active class participation, paper summaries and the final reports. Even if the attendance in this course is very poor or none, the students can obtain credits for this course through e-learning system that

Assessment Methods and Criteria(評価方法・基準)	are prepared in some classes, or a supplemental class. Grading will be based on the student's understanding of the course subject matter. The students' understanding will be evaluated on the basis of papers and quizzes related to the topics and be scored from 0 to 100.
Textbook/Material Language(教科書・資料の言語)	Combination of Japanese and English (We will use documents and materials in English whenever possible.)
Course Based on Practical Work Experience(実務経験を活かした授業)	Applicable (Faculty members engaged in the clinical practice of Pathology, Radiology and Laboratory medicine will lecture disease diagnostics from the basics to actual levels in an omnibus style.)