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)
RDM7-010-82-2	2026whole year	Graduate School of Medical Sciences (20110)	1, 2, 3, 4	2	others

Course Title(Theme)(科目名(講義題目))	Instructor(s)(担当教員)
Advanced Therapeutics(C2)	SAKAGAMI Takuro, KANBA Tomomi, MURAKAMI Daizou, MIYAMARU Satoru, FUKUSHIMA Satoshi, MIYAMOTO Hideaki, ISE Momoko, Hibi Taizou, TANAKA Yasuhito

Goals with their ratio(学修成果とその割合)
1.Advanced expert knowledge, skill and research capability ‥‥80% 2.Profound inter-disciplinary knowledge ‥‥20%

Type of Class(授業の形態)	Lecture
Teaching Method(授業の方法)	PowerPoint will be used in the lectures, and active participation in the discussion is encouraged.
Course Goals(授業の目的)	Basic concept of molecular targeting and clinical application using antibody, peptide will be reviewed. Because the relation between immune disorders and pathogenesis has been revealed, immune modulation serve as a therapeutic strategy for viral infectious diseases, auto-immune diseases, and cancer. This course provides a rationale, current evaluation and problems of immune-modulation therapy. On the other hand, this course will introduce the basic research and progress to the establishment of organ transplantation, cell transplantation and artificial organs, and also focus on the current efficacy and limitations. In addition, progress in endoscopic treatments will be reviewed. Future therapeutic strategies will be also discussed.
Course Learning goals(学修目標)	【A level (A水準)】 To understand a rationale, current evaluation and problems of immune-modulation therapy. In addition, to comprehend the basic research and progress to the establishment of organ transplantation, cell transplantation and artificial organs, and also to know the current efficacy and limitations. Finally, progress in endoscopic treatments will be recognized. 【C level (C水準)】
Course Outline(授業の概要)	Recent advances in molecular biology and medical engineering provide a new era in the treatment of various diseases. In this regard, the molecules, which play central roles in the pathogenesis of chronic inflammation and carcinogenesis, have been identified, leading to the development of molecular targeting therapies. In addition, it has been described how immune systems of the body contribute to pathogenesis of diseases, and immune-modulation has been employed in the clinical setting. Furthermore, organ transplantation, cell transplantation and artificial organs have been introduced to complement organ failures. On the other hand, progresses in endoscopic machinery have established endoscopic treatment, and serve as less invasive treatments. This course will focus on progress in treatments and future orientation of medicine.

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		Miyamoto Hideaki【eJ-0】	Progress in endoscopic treatment and diagnosis of gastrointestinal diseases
2		Tanaka Yasuhito 【eJ-0】	State-of the art in diagnosis and treatment of hepatic disease
3		Tanaka Yasuhito 【eJ-0】	Molecular targeting therapy in gastrointestinal & hepatic diseases
4		Sakagami Takuro 【eJ-0】	Progress in diagnosis and treatment of respiratory diseases
5		Sakagami Takuro 【eJ-0】	Topics of allergic respiratory diseases
6		Sakagami Takuro 【eJ-0】	Topics of diagnosis and treatment of lung cancer
7		Miyamaru Satoru【eJ-0】	The diagnosis and management of dysphagia
8		Ise Momoko 【eJ-0】	Treatment using cochlear implant for severe sensorineural hearing loss
9		Murakami Daizo 【eJ-0】	Endoscopic treatment of head and neck diseases
10		Hibi Taizo 【eJ-0】	Organ transplantation; the past and the present
11		Hibi Taizo 【eJ-0】	Liver transplantation; basis and clinical application
12		Kamba Tomomi 【eJ-0】	Current therapeutic strategy for urogenital cancers
13		Kamba Tomomi 【e-0】	Endoscopic treatments for urinary diseases
14		Fukushima Satoshi 【eJ-0】	Molecular targeting therapy for autoimmune diseases in skin
15		Fukushima Satoshi 【eJ-0】	Immune therapy in skin cancer

Estimated out-of-class study time	
Required Textbook(テキスト)	Textbooks are not specified, and handouts will be distributed.
Reading List(参考文献)	1) Molecular Cell Biology, sixth edition, by Lodish H, et al. W.H.Freeman, 2008 2) Carithers RL Jr. Liver transplantation. American Association for the Study of Liver Diseases. Liver Transpl 2000 Jan;6 (1):122-35.
Enrollment Conditions(履修条件)	
Assessment Methods and Criteria(評価方法・基準)	Grading will be based on active class participation, understanding, paper summaries, and the final report.The students' understanding will be evaluated on the basis of papers and quizzes related to the topics dealt with in class to be scored from 0 to 100.

Assessment Methods and Criteria(評価方法・基準)	Final grades will be based on the average score of the papers and quizzes as well as participation in class discussions
Textbook/Material Language(教科書・資料の言語)	Japanese
Course Based on Practical Work Experience(実務経験を活かした授業)	Applicable